York River Basin

Cause Group Code: F01L-01-HG Lake Gordonsville

Cause Location: Includes the entirety of Lake Gordonsville, also known as Bowlers Mill Lake.

City / County: Louisa Co.
Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, mercury fish consumption advisory. The advisory, dated 09/30/04, limits largemouth bass consumption to no more than two meals per month. Additionally, an exceedance of the risk-based tissue value (TV) of 300 ppb for mercury (HG) was recorded in 2 species (largemouth bass and bluegill sunfish) of fish sampled (5 total excursions) in 2017 at fish tissue monitoring station 8-DOV001.20, near the dam.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01L_DOV01A06 / Lake Gordonsville / Segment includes all 5A Mercury in Fish Tiss of Lake Gordonsville.	sue	2006	L	77.31
Lake Gordonsville Fish Consumption Mercury in Fish Tissue - Total Impaired Size by Water Ty	Estuary (Sq. Miles)	,		River (Miles)

Sources:

Source Unknown

York River Basin

Cause Group Code: F01R-01-BAC South Anna River

Cause Location: Begins at the headwaters of the South Anna River and continues downstream until the confluence with Dove Fork.

Begins again at the start of waterbody F02R, where Wheeler Creek intersects the South Anna River, and continues

downstream until the confluence with Rock Creek.

City / County: Louisa Co. Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (18 of 38 samples - 47.4%) at DEQ station 8-SAR089.35 at Route 613; E. coli bacteria criterion excursions (3 of 14 samples - 21.4%) at DEQ station 8-SAR097.82 at Route 603; E. coli bacteria criterion excursions (3 of 13 samples - 23.1%) at DEQ station 8-SAR099.81 at Route 860; E. coli bacteria criterion excursions (8 of 13 samples - 61.5%) at station 8-SAR101.03 at Route 231.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F01R-01) watershed (Eq. ID POL0337) was approved by the EPA on 8/2/2006 (Fed ID 24423); the EPA approved a modification on 4/27/2015 (Fed ID 64651). The SWCB approved the modified TMDL on 12/11/2014.

Outle TMD

Assessment Unit / Water Na	ame / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_SAR02A02 / South the confluence with an unnamed downstream of the Route 231 briuntil the confluence with Dove Fo	tributary, approximately 0.25 mile dge, and continues downstream	4A	Escherichia coli (E. coli)		2002	L	3.90
VAN-F01R_SAR02B10 / South the headwaters of the South Annual until the confluence with an unnamile downstream of the Route 23	a River and continues downstream med tributary, approximately 0.25	4A	Escherichia coli (E. coli)		2002	L	3.19
VAN-F02R_SAR02A00 / South the start of waterbody F02R, whe South Anna River, and continues with Rock Creek.	re Wheeler Creek intersects the	4A	Escherichia coli (E. coli)		2006	L	3.98
South Anna River				Estuary		ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Total I	mpaired	Size by Water Type:				11.07
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff from Forest/Grassland/Parkland			nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Water	owl	Wildlife Other than Waterfowl			

York River Basin

Cause Group Code: F01R-02-BAC Wheeler Creek

Cause Location: Begins at the headwaters of Wheeler Creek and continues downstream until the confluence with Hudson Creek.

City / County: Albemarle Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (8 of 11 samples - 72.7%) at DEQ station 8-WLR000.31 upstream of the confluence with Camp Creek. 2014 Assessment: E. coli bacteria criterion excursions (3 of 6 samples - 50.0%) at DEQ station 8-WLR000.26 at Route 640.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water	Name / Location Desc.	Caus Categ	e Ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
	eeler Creek / Segment begins and continues downstream until t		Escherichia coli (E. col	i)	2010	L	0.24
-	eeler Creek / Segment begins a and continues downstream until		Escherichia coli (E. col	i)	2012	L	6.00
Wheeler Creek				Estuary		ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - To	otal Impaire	d Size by Water Type:				6.24
Sources:							
Grazing in Riparian or	Impacts from Land	Lives	tock (Grazing or	Runoff f	rom		
Shoreline Zones	Application of Wastes	Feeding Operations)		Forest/0	Grasslaı	nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Wate	rfowl	Wildlife Waterfo		han	

York River Basin

Cause Group Code: F01R-02-BEN Wheeler Creek

Cause Location: Begins at the headwaters of Wheeler Creek and continues downstream until the confluence with Camp Creek.

City / County: Albemarle Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2016 Assessment: Three biological monitoring events in 2009 and 2010 at station 8-WLR000.31 resulted in a VSCI

assessment that indicates an impaired macroinvertebrate community.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F01R_WLR01B10 / Wheeler Creek / Segment begins at the headwaters of Wheeler Creek and continues downstream until the confluence with Camp Creek.

5A Benthic Macroinvertebrates Bioassessments

2008 L 6.00

Wheeler Creek
Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

6.00

Sources:

Source Unknown

York River Basin

Cause Group Code: F01R-03-BAC Hudson Creek

Cause Location: Begins at the confluence of Bunch Creek and Fielding Creek and continues downstream until the confluence with

Wheeler Creek.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ ambient station 8-HUD001.80 at Route 695.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Cycle **TMDL** Cause First Dev. Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size VAN-F01R_HUD01A04 / Hudson Creek / Segment begins at the Escherichia coli (E. coli) 2012 L 3.61 confluence of Bunch Creek and Fielding Creek and continues downstream until the confluence with Wheeler Creek. **Hudson Creek** Reservoir River **Estuary** (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 3.61

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F01R-03-BEN Camp Creek

Cause Location: Begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.

City / County: Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2016 Assessment: A total of three biological monitoring events in 2009 and 2010 at station 8-CMP000.28 at Route 717 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_CMP01A12 / Camp Creek / Segment begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.	5A Benthic Macroinvert Bioassessments	ebrates	2012	L	2.01
Camp Creek		Estuary	Res	ervoir	River
Aquatic Life		(Sq. Miles)	(Ac	res)	(Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:					

Sources:

Source Unknown

York River Basin

Cause Group Code: F01R-04-BAC Camp Creek

Cause Location: Begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (6 of 11 samples - 54.5%) at DEQ ambient station 8-CMP000.28 at

Route 717.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB

approved by the EFA on 6/2/2006 (Fed ID 24424), the EFA approved a modification on 4/2//2013 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Cycle TMDL

Assessment Unit / Water Name / Location Desc.

Cause First Dev. Water Category Cause Name Listed Priority Size

4A Escherichia coli (E. coli) 2012 L 2.01

VAN-F01R_CMP01A12 / Camp Creek / Segment begins at the confluence with Central Branch and continues downstream to the confluence with Wheeler Creek.

Camp CreekEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.01

Sources:

Grazing in Riparian or Shoreline Zones

Sewage Discharges in Unsewered Areas Impacts from Land Application of Wastes

Wastes from Pets

Livestock (Grazing or Feeding Operations) Waterfowl Runoff from Forest/Grassland/Parkland Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F01R-04-BEN South Anna River

Cause Location: Begins at the headwaters of the South Anna River and continues downstream until the confluence with an unnamed

tributary, approximately 0.25 mile downstream of the Route 231 bridge. Begins again at the confluence with Mill

Creek and continues downstream until the mouth of watershed F01, at the confluence with Wheeler Creek.

City / County: Louisa Co. Orange Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Four biological monitoring events in 2016 and 2017 at DEQ station 8-SAR101.03 at Route 231 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community. Four biological monitoring events in 2016 and 2017 at DEQ station 8-SAR091.64 at Route 695 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F01R_SAR01A02 / South Anna River / Segment begins at the confluence with Mill Creek and continues downstream until the mouth of watershed F01, at the confluence of Wheeler Creek to the South Anna River.	5A e	Benthic Macroinvertebra Bioassessments	ates	2020	L	4.95
VAN-F01R_SAR02B10 / South Anna River / Segment begins at the headwaters of the South Anna River and continues downstrear until the confluence with an unnamed tributary, approximately 0.25 mile downstream of the Route 231 bridge.		Benthic Macroinvertebra Bioassessments	ates	2020	L	3.19
South Anna River Aquatic Life			Estuary (Sq. Miles)		ervoir res)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:						

Sources:

Source Unknown

York River Basin

Cause Group Code: F02R-01-BAC South Anna River

Cause Location: Begins at the confluence with Rock Creek and continues downstream until the confluence with Beaver Creek.

City / County: Fluvanna Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at DEQ station 8-SAR070.96 at Route 646 (2014 Assessment). E. coli bacteria criterion excursions (4 of 7 samples - 57.1%) at DEQ station 8-SAR083.25 at Route 649.

The Pamunkey River and Tributaries modified bacteria TMDL for the South Anna River watershed (EQ ID POL0335) was approved by EPA on 08/02/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
	h Anna River / Segment begins at ek and continues downstream until t		Escherichia coli (E. coli)		2004	L	4.97
the confluence with Roundabou	N-F02R_SAR01B20 / South Anna River / Segment begins at 4A Escherichia coli (E. coli) 2004 confluence with Roundabout Creek and continues downstream til the confluence with Harris Creek.					L	1.00
	th Anna River / Segment begins at k and continues downstream to the reek.		Escherichia coli (E. coli)		2018	L	8.19
South Anna River				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Total	Impaired	Size by Water Type:				14.16
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff from Forest/Grassland/Parkland			nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Water	fowl	Wildlife Waterfo		han	

York River Basin

Cause Group Code: F02R-01-BEN **Fosters Creek**

Cause Location: Begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna

River.

City / County: Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Four biological monitoring events in 2015 and 2016 at DEQ station 8-FOS000.84 resulted in a VSCI assessment that indicates

an impaired macroinvertebrate community

Cycle **TMDL** Cause First Dev. Water **Priority** Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Size VAN-F02R_FOS01A06 / Fosters Creek / Segment begins at the Benthic Macroinvertebrates 2018 4.91

headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.

Bioassessments

Fosters Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

4.91

Sources:

Source Unknown

York River Basin

Cause Group Code: F02R-02-BAC Unnamed tributary to South Anna River

Cause Location: Begins at the headwaters of an unnamed tributary to the South Anna River and continues downstream until the

confluence with the South Anna River.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2014 Assessment: E. coli bacteria criterion excursions (1 of 2 samples - 50.0%) at DEQ station 8-XIE000.27 upstream of Route 697 and E. coli bacteria criterion excursions (1 of 2 samples - 50.0%) at DEQ station 8-XIE000.40 upstream of the Twin Oaks

STP.

The Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F02R-01) watershed (Eq. ID POL0335) was approved by the EPA on 8/2/2006 (Fed ID 24424); the EPA approved a modification on 4/27/2015 (Fed ID 64664). The SWCB approved the modified TMDL on 12/11/2014.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_XIE01A08 / Unnamed tributary to South Anna River / Segment begins at the headwaters of an unnamed tributary to the South Anna River and continues downstream until the confluence with the South Anna River.		2008	L	1.34	
Unnamed tributary to South Anna River				ervoir	River
Recreation		(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:					

Sources:

ources:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F02R-03-BAC **Fosters Creek**

Cause Location: Begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna

River.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at DEQ station 8-FOS000.84 at Route 640.

A new TMDL is not required for this impaired segment of Fosters Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_FOS01A06 / Fosters Creek / Segment begins at the headwaters of Fosters Creek and continues downstream until the confluence with the South Anna River.	4A Escherichia coli (E. coli)		2014	L	4.91
Fosters Creek Recreation		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Escherichia coli (E. coli) - Total	Impaired Size by Water Type:	,	`	,	4.91

Sou

ources:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Urban Runoff/Storm Sewers	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F02R-04-BAC **Roundabout Creek**

Cause Location: Begins at the confluence with an unnamed tributary to Roundabout Creek, approximately 0.9 rivermile downstream

from the Route 64 crossing, and continues downstream until the confluence with the South Anna River.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria excursions (6 of 11 samples - 54.5%) at DEQ station 8-RDB001.72 at Route 640.

A new TMDL is not required for this impaired segment of Roundabout Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Caus Assessment Unit / Water Name / Location Desc. Categ	se ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_RDB01A04 / Roundabout Creek / Segment begins at the confluence with an unnamed tributary to Roundabout Creek, approximately 0.9 rivermile downstream from the Route 64 crossing, and continues downstream until the confluence with the South Anna River.	Escherichia coli (E. coli)	2014	L	3.84
Roundabout Creek		,	ervoir	River
Recreation	(Sq	ı. Miles) (Ad	cres)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				

Sou

ources:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F02R-05-BAC Harris Creek

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 6.97 and continues downstream to the confluence

with the South Anna River.

City / County: Louisa Co.

Unsewered Areas

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-HRS001.35 at Route 604.

A new TMDL is not required for this impaired segment of Harris Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Assessment Unit / Water	Cause Name / Location Desc. Category Cause Name			Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F02R_HRS01A16 / Harr confluence with an unnamed tr downstream to the confluence	ibutary at rivermile 6.97 and conti	4A Escherichia coli (E. coli) nues)	2016	L	6.97
Harris Creek		Estuary		ervoir	River	
Recreation			(Sq. Miles) (Acres)			(Miles)
	Escherichia coli (E. coli) - Tot	al Impaired Size by Water Type:				6.97
Sources:						
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland			nd
Sewage Discharges in	Wastes from Pets	Waterfowl	Wildlife Other than			

Waterfowl

York River Basin

Cause Group Code: F02R-06-BAC Rock Creek

Cause Location: Begins at the confluence with Little Rock Creek and continues downstream to the confluence with South Anna River.

City / County: Fluvanna Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-RKC001.35 at Route 640.

A new TMDL is not required for this segment of Rock Creek because the downstream Pamunkey River and Tributaries modified bacteria TMDL (Fed ID 64664, 04/27/2015) included modeling, source identification, and reductions that covered the entire South Anna River (F02R-01) watershed (Eq. ID POL0335). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24424, 08/02/2006).

Cycle **TMDL** First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size VAN-F02R RKC01A16 / Rock Creek / Segment begins at the Escherichia coli (E. coli) 2016 L 2.72 confluence with Little Rock Creek and continues downstream to the confluence with South Anna River. Rock Creek Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.72

Sources:

Grazing in Riparian or Shoreline Zones Impacts from Land Livestock (Grazing or Shoreline Zones Application of Wastes Feeding Operations) Forest/Grassland/Parkland Waterfowl Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F03R-01-BEN Cub Creek

Cause Location: Begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna

River.

City / County: Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2018 Assessment: Two biological monitoring events in 2012 at station 8-CUB002.73 at Route 648 resulted in a VSCI

assessment that indicates an impaired macroinvertebrate community.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F03R_CUB01A08 / Cub Creek / Segment begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna River.

5A Benthic Macroinvertebrates Bioassessments 2014 L 3.10

Cub Creek

Aquatic Life

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

Reservoir (Niles)

River (Miles)

Aquatic Life

3.10

Sources:

Source Unknown

York River Basin

Cause Group Code: F03R-02-BAC Taylors Creek

Cause Location: Begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna

River.

City / County: Hanover Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (4 of 24 samples - 16.7%) at DEQ station 8-TLR005.50 at Route 610. E. coli bacteria excursions (2 of 12 samples - 16.7%) at DEQ station 8-TLR009.82 at Route 664.

The Pamunkey River and Tributaries modified bacteria TMDL for the Taylors Creek watershed (Eq. ID POL0336) was approved by EPA on 04/27/2015 (Fed ID 64655). The SWCB approved the modified TMDL on 12/11/2014. This impairment was previously nested in the Pamunkey River Basin bacteria TMDL (24425, 08/02/2006).

Cycle **TMDL** Cause First Dev. Water Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Size 4A Escherichia coli (E. coli) VAN-F03R TLR01A00 / Taylors Creek / Segment begins at the 2008 L 16.54

headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.

Taylors Creek

Recreation

Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 16.54

Sources:

Grazing in Riparian or Impacts from Land Livestock (Grazing or Runoff from Shoreline Zones Application of Wastes Feeding Operations) Forest/Grassland/Parkland

Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than

Unsewered Areas Wastes from Fets Waterfowl Waterfowl

York River Basin

Cause Group Code: F03R-02-BEN **Taylors Creek**

Cause Location: Begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna

River.

City / County: Hanover Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Two biological monitoring events in 2013 at DEQ station 8-TLR005.30 and four biological monitoring events in 2014 and 2015 at DEQ station 8-TLR014.44 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	First Listed	Dev. Priority	Water Size
VAN-F03R_TLR01A00 / Taylors Creek / Segment begins at the headwaters of Taylors Creek and continues downstream until the confluence with the South Anna River.	5A Benthic Macroinvertebrates Bioassessments	2016	L	16.54
Toylora Crook				

Taylors Creek Estuary Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type: 16.54

Cycle

TMDL

Sources:

Source Unknown

York River Basin

Cause Group Code: F03R-03-BEN Fork Creek

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 7.63 and continues downstream to the confluence

with South Branch Fork Creek.

City / County: Goochland Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Four biological monitoring events in 2015 and 2016 at DEQ station 8-FRK001.78 (upstream of South Branch Fork Creek)

resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

TMDL Cycle First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed **Priority** Size VAN-F03R_FRK02A16 / Fork Creek / Segment begins at the Benthic Macroinvertebrates 2018 4.33 Bioassessments confluence with an unnamed tributary just upstream from Route 683 and continues downstream to the confluence with South Branch Fork Creek.

Fork Creek

Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type: 4.33

Sources:

Source Unknown

York River Basin

Cause Group Code: F03R-03-DO **Cub Creek**

Cause Location: Begins at the confluence with Turners Creek and continues downstream until the confluence with the South Anna

River.

City / County: Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5A

Excursions less than the minimum dissolved oxygen criterion (4 of 12 samples - 33.3%) at station 8-CUB001.73 at Route 601.

Cycle **TMDL** First Dev. Cause Water Listed Priority Category Cause Name Size Assessment Unit / Water Name / Location Desc. Dissolved Oxygen 2008 3 10

VAN-F03R_CUB01A08 / Cub Creek / Segment begins at the confluence with Turners Creek and continues downstream until the

confluence with the South Anna River.

Cub Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life** 3.10

Dissolved Oxygen - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F03R-04-BAC Fork Creek

Cause Location: Begins at the perennial headwaters and continues downstream until the confluence with the South Anna River.

City / County: Goochland Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 23 samples - 13.0%) at DEQ station 8-FRK006.02 at Route 683. E. coli bacteria criterion excursions (2 of 6 samples - 33.3%) at DEQ station 8-FRK001.66 at Route 640 (2012 Assessment).

The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015 (Fed ID 64653). A new TMDL is not required for this impaired segment of Fork Creek because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
	Creek / Segment begins at the Fork Creek and continues downst outh Anna River.	4A ream	Escherichia coli (E. coli)	1	2008	L	1.79
confluence with an unnamed tr	Creek / Segment begins at the ibutary just upstream from Route he confluence with South Branch		Escherichia coli (E. coli)		2016	L	4.33
_	Creek / Segment begins at the inues downstream to the confluer upstream from Route 683.	4A nce	Escherichia coli (E. coli)		2016	L	1.50
Fork Creek				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ac	res)	(Miles)
	Escherichia coli (E. coli) - Tot	al Impaired	Size by Water Type:				7.62
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff from Forest/Grassland/Par		nd/Parkla	nd
Sewage Discharges in	Wastes from Pets	\/\/ater	fowl	Wildlife.	Other ti	han	

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F03R-04-BEN South Branch Fork Creek

Cause Location: Begins at Windsor Lake Drive and continues downstream to the confluence with Fork Creek.

City / County: Goochland Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Four biological monitoring events in 2015 and 2016 at station 8-SBK000.03 above the confluence with Fork Creek resulted in a

Owelle TMDI

VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	First Listed	Dev. Priority	Water Size
VAN-F03R_SBK01A18 / South Branch Fork Creek / Segment begins at Windsor Lake Drive and continues downstream to the	5A Benthic Macroinvertebrates Bioassessments	2018	L	3.05

begins at Windsor Lake Drive and continues downstream to the confluence with Fork Creek.

South Branch Fork Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type: 3.05

Sources:

Source Unknown

York River Basin

Cause Group Code: F03R-05-BEN Unnamed tributary to Taylors Creek

Cause Location: Begins at the headwaters of the unnamed tributary to Taylors Creek and continues downstream to the confluence

with Taylors Creek.

City / County: Hanover Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Two biological monitoring events in 2015 at DEQ station 8-XKA000.91 resulted in a VSCI assessment that indicates an

impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.

Cause
Category Cause Name

Cycle TMDL First Dev. Water Listed Priority Size

Benthic Macroinvertebrates 2018 L 1.43
Bioassessments

VAN-F03R_XKA01A18 / Unnamed tributary to Taylors Creek / Segment begins at the headwaters of the unnamed tributary to Taylors Creek and continues downstream to the confluence with Taylors Creek.

Unnamed tributary to Taylors Creek

Estuary (Sq. Miles)

Reservoir (Acres)

River (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

1.43

Sources:

Aquatic Life

Source Unknown

York River Basin

Cause Group Code: F03R-07-BAC South Anna River

Cause Location: Begins at the confluence with Northeast Creek and continues downstream until the confluence with an unnamed

tributary to the South Anna River, approximately rivermile 66.97.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (10 of 34 samples - 29.4%) at DEQ station 8-SAR068.57 at Route 605.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of the South Anna River because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed.

Escherichia coli (E. coli) - T	otal Impaired Size by Water Type:	(64. 141165)	(Ac		1.76
		(Oq. Miles)	(/10	,	(1411100)
		(Sa Miles)	(Δς	cres)	(Miles)
		Estuary			River
st Creek and continues downstrea	ım until		2006	L	1.76
er Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
	outh Anna River / Segment beging the Creek and continues downstreamed tributary to the South Anna R	er Name / Location Desc. Category Cause Name outh Anna River / Segment begins at 4A Escherichia coli (E. coli) at Creek and continues downstream until med tributary to the South Anna River,	er Name / Location Desc. Category Cause Name outh Anna River / Segment begins at to Creek and continues downstream until med tributary to the South Anna River, 7. Estuary	Cause Cause Cause Category Cause Name Listed outh Anna River / Segment begins at to Creek and continues downstream until med tributary to the South Anna River, T. Cause Cause Cause Name First Listed 2006 Estuary Res	Cause Cause Category Cause Name Listed Priority outh Anna River / Segment begins at 4A Escherichia coli (E. coli) 2006 L st Creek and continues downstream until med tributary to the South Anna River, 7. Estuary Reservoir

urces:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F03R-08-BAC Deep Creek

Cause Location: Begins at the headwaters of Deep Creek and continues downstream to the confluence with the South Anna River.

City / County: Goochland Co. Louisa Co.

Use(s): Recreation

Unsewered Areas

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2016 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-DEP000.37 at Route 640.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of Deep Creek because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Cycle TMDL

Waterfowl

Assessment Unit / Water Name / Location Desc.			e ory Cause Name		First Listed	Dev. Priority	Water Size
VAN-F03R_DEP01A12 / Deep headwaters of Deep Creek and confluence with the South Anna		4A	Escherichia coli (E. coli)		2012	L	5.79
Deep Creek				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Tota	ıl Impaire	d Size by Water Type:				5.79
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff from Forest/Grassland/Parkland			nd
Sewage Discharges in	Wastes from Pets	Water	fowl	Wildlife Other than			

York River Basin

Cause Group Code: F03R-09-BAC South Anna River

Cause Location: Begins at the confluence with Jones Creek and continues downstream until the confluence with an unnamed

tributary at rivermile 31.5.

Louisa Co. City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (9 of 34 samples - 26.5%) at DEQ station 8-SAR035.05 at Route 617. E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 8-SAR038.45 at Route 635.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24444, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the South Anna River (F04R-01) watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of the South Anna River because the original and modified bacteria TMDLs included modeling, source identification, and reductions that covered the entire South Anna River (F04R-01) watershed (Eq ID POL0341).

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F03R_SAR01C06 / South Anna River / Segment begins a the confluence with Jones Creek and continues downstream until confluence with an unnamed tributary at rivermile 31.5.)	2012	L	4.63
South Anna River		Estuary (Sq. Miles)		ervoir res)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:					

Sou

ources:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F04R-01-BAC South Anna River

Cause Location: The South Anna River from the confluence with Taylors Creek downstream to the Ashland Municipal STP discharge

near the confluence with Falling Creek.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The South Anna River from Route 33 to the Ashland Municipal STP was assessed as fully supporting but threatened during the 1998 cycle. In 2002, the segment was extended upstream to Taylors Creek and downgraded to impaired.

During the 2006 cycle, E. coli monitoring was conducted at the Route 33 bridge (8-SAR021.22), as well as at new stations 8-SAR014.47 and 8-SAR012.42. Exceedance rates were acceptable at the upstream stations (1/12 at 8-SAR021.22 and 0/9 at 8-SAR014.47), however there were 3 exceedances out of 12 samples at 8-SAR012.42. Because of the fully supporting status of the upstream portion, the impaired segment was shortened from the UT above Horseshoe Bridge Road downstream to the Ashland Municipal STP.

The Pamunkey River Basin Bacteria TMDL was completed during the 2008 cycle and was approved by the EPA on 8/2/2006; the TMDL included the entire previously listed length.

Additional monitoring occurred during the 2014 cycle. Due to E. coli exceedances at 8-SAR021.22 (6/12), the segment was returned to its original length (Taylors Creek to the Ashland Municipal STP).

	Cause	9		Cycle First	TMDL Dev.	Water
Assessment Unit / Water Name / Location Desc.		ry Cause Name		Listed	Priority	Size
VAP-F04R_SAR01A98 / South Anna River / From Taylors Creek to 5 mi upstream of the Ashland PWS intake.	4A	Escherichia coli (E. coli)		2014	L	2.77
VAP-F04R_SAR02A98 / South Anna River / From 5 mi upstream of the Ashland PWS intake to the PWS intake.	n 4A	Escherichia coli (E. coli)		2014	L	5.04
VAP-F04R_SAR03A02 / South Anna River / From the Ashland PWS intake to the UT above Horseshoe Bridge Road.	4A	Escherichia coli (E. coli)		2014	L	0.54
VAP-F04R_SAR03B06 / South Anna River / From the UT above Horseshoe Bridge Road to the Ashland Municipal STP discharge.	4A	Escherichia coli (E. coli)		2008	L	8.90
South Anna River			Estuary	Res	ervoir	River
Recreation			(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:						17.25

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F04R-02-BAC South Anna River

Cause Location: The South Anna River from the Ashland Municipal STP discharge near the confluence with Falling Creek

downstream to its mouth.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The segment VAP-F04R-02 (00249) was initially listed as impaired of the Recreation Use during the 1998 cycle. During the 2006 cycle, E. coli monitoring at the Route 738 bridge (8-SAR001.11) was fully supporting (1/21); therefore, the segment was delisted.

However, during the 2008 cycle, the Pamunkey River Basin Bacteria TMDL was completed and was approved by the EPA on 8/2/2006. The TMDL addressed the original TMDL listing and assigned WLAs and LAs. The E. coli violation rate at station 8-SAR001.11 remained acceptable during the 2008 and 2010 cycles; therefore, the water was considered a Category 2C water.

Cuele TMDI

During the 2012 cycle, the segment became impaired for E. coli again. It is considered Category 4A.

The exceedance rate was 7/36 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	First Listed	Dev. Priority	Water Size
VAP-F04R_SAR03A98 / South Anna River / From the As Municipal STP discharge to its mouth at the Pamunkey Rive		2012	L	4.76
South Anna River Recreation	Estuary (Sq. Mile		servoir cres)	River (Miles)
Escherichia coli (E. coli)	- Total Impaired Size by Water Type:			4.76

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F04R-03-BAC Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2006 cycle, Stagg Creek was assessed as not supporting the Recreation Use due to E. coli exceedances at 8-

STG005.46 (Route 657) and at 8-STG001.00 (Route 686).

No additional data has been collected at 8-STG005.46.

The segment was determined to be nested within the completed TMDL for the South Anna River bacterial impairment F04R-01-

Cycle TMDI

BAC; therefore, it will be considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Fir List		Water Size
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth at the South Anna River	4A Escherichia coli (E. coli)	200)6 L	6.56
Stagg Creek			Reservoir	River
Recreation	((Sq. Miles)	(Acres)	(Miles)
Escherichia coli (E. coli) - Total	Impaired Size by Water Type:			6.56

Sources:

Agriculture Non-Point Source

York River Basin

Cause Group Code: F04R-03-DO Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

During the 2008 cycle, Stagg Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/11 at 8-STG005.46 (Route 686).

Additional monitoring was conducted in the 2016 cycle, however the data was insufficient for assessment (1/9). In addition, 2009 sampling at freshwater probabilistic monitoring station 8-STG000.73 was acceptable; therefore, further monitoring is warranted.

Dissolved Oxygen - To	tal Impaired Size by Water Type:				6.56
Stagg Creek Aquatic Life		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth the South Anna River	at 5C Dissolved Oxygen		2008	L	6.56
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F04R-03-PH Stagg Creek

Cause Location: Headwaters to mouth at South Anna River

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, Stagg Creek was impaired of the Aquatic Life Use due to a pH exceedance rate of 3/9 at 8-STG005.46

Cycle TMDI

6.56

(Route 686). In addition, the exceedance rate was 1/2 at 8-STG000.73.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	L		Dev. Priority	Water Size
VAP-F04R_STG01A06 / Stagg Creek / Headwaters to mouth at the South Anna River	5C pH		2016	L	6.56
Stagg Creek		Estuary	Rese	ervoir	River
Aquatic Life		(Sq. Miles)	(Ac	res)	(Miles)

pH - Total Impaired Size by Water Type:

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F05R-01-BAC Newfound River

Cause Location: Newfound River from the confluence of Needstan Creek to its mouth.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2004 cycle, the segment was assessed not supporting of the Recreation Use based on fecal coliform exceedances at the Route 667 bridge (8-NFD002.26). The impairment converted to E. coli during the 2008 cycle.

The Pamunkey River Basin Bacteria TMDL was approved by the EPA on 8/2/2006. The TMDL addressed this segment and the Newfound River is classified as a Category 4A water.

Additional monitoring was conducted during the 2018 cycle. The exceedance rate was 12/24; therefore, the segment remains impaired.

	Escherichia coli (E. coli) - To	tal Impaire	d Size by Water Type:				10.95
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
Newfound River				Estuary		ervoir	River
VAP-F05R_NFD01A00 / New of Needstan Creek.	wfound River / Mainstem downstr	eam 4A	Escherichia coli (E. coli)	2008	L	10.95
Assessment Unit / Water	r Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F05R-01-BEN Newfound River

Cause Location: Newfound River from the confluence of Needstan Creek to its mouth.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

During the 2018 cycle, the lower Newfound River was impaired of the Aquatic Life Use due to benthic community alteration at 2016 freshwater probabilistic monitoring station 8-NFD004.19.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Categor	Cycle First ause Name Liste	
The Foot _ In Both to F Homound Part Hameton down the arms	thic Macroinvertebrates 2018 assessments	3 L 10.95
Newfound River		eservoir River Acres) (Miles)
Benthic Macroinvertebrates Bioassessments - Total Impaired Size	e by Water Type:	10.95

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-01-BAC **Mountain Run**

Cause Location: Begins at the confluence of Madison Run and continues downstream until the confluence with the North Anna River.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (7 of 18 samples - 38.9%) at DEQ station 8-MTN000.96 at Route 643. The York Basin Watersheds around Lake Anna bacteria TMDL for the Mountain Run watershed (Eq. ID POL0239) was approved by the EPA on 11/04/2005 (Fed ID 24427). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Beaver Creek watershed (ID 152) was approved by the EPA on 01/09/2013.

Cycle **TMDL** First Cause Dev. Water Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size Escherichia coli (E. coli) 1998 2.64 VAN-F06R_MTN01A00 / Mountain Run / Segment begins at the

confluence of Madison Run and continues downstream until the confluence with the North Anna River.

Mountain Run **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.64

Sources:

Grazing in Riparian or Shoreline Zones Sewage Discharges in **Unsewered Areas**

Impacts from Land Application of Wastes Wastes from Pets

Livestock (Grazing or Feeding Operations) Waterfowl

Runoff from Forest/Grassland/Parkland Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F06R-01-BEN North Anna River

Cause Location: Begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.

City / County: Louisa Co. Orange Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Two biological monitoring events in 2015 at station 8-NAR065.95 (at ~0.6 rivermile downstream from Route 639) resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Cycle TMDL First Dev. Listed Priority	Water Size
VAN-F06R_NAR02A04 / North Anna River / Segment begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.	5A Benthic Macroinvertebrates Bioassessments	2018 L	2.79
North Anna River	Estuary (Sg. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life Benthic Macroinvertebrates Bioassessments - Total	(1 ,	(Acres)	2.79

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-02-BAC Beaver Creek

Cause Location: Begins at the confluence with Cooks Creek, approximately 0.68 rivermile upstream from the Route 638 bridge, and

continues downstream until the confluence with the North Anna River.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2014 Assessment: E. coli bacteria criterion excursions (5 of 13 samples - 38.5%) at DEQ station 8-BRC001.88 at Route 638. The York Basin Watersheds around Lake Anna bacteria TMDL for the Beaver Creek watershed (Eq. ID POL0238) was approved by the EPA on 11/04/2005 (Fed ID 24426). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Beaver Creek watershed (ID 250) was approved by the EPA on 01/09/2013.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F06R_BRC01A02 / Beaver Creek / Segment begins at the confluence with Cooks Creek, approximately 0.68 rivermile upstream from the Route 638 bridge, and continues downstream until the confluence with the North Anna River.

Beaver Creek
Recreation
Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.83

Escherichia coli (E. coli)

Sources:

Grazing in Riparian or Shoreline Zones

Sewage Discharges in Unsewered Areas Impacts from Land Application of Wastes

Wastes from Pets

Livestock (Grazing or Feeding Operations)

Waterfowl

Runoff from

Forest/Grassland/Parkland

1998

2.83

Wildlife Other than

Waterfowl

York River Basin

Cause Group Code: F06R-03-BAC **Gold Mine Creek**

Cause Location: Begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (5 of 10 samples - 50.0%) at DEQ station 8-GMC002.19 at Route 613. The York Basin Watersheds around Lake Anna bacteria TMDL for the Goldmine Creek watershed (Eq. ID POL0240) was approved by the EPA on 11/04/2005 (Fed ID 24428). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Goldmine Creek watershed (ID 247) was approved by the EPA on 01/09/2013.

		Cycle	TMDL	
	Cause	First	Dev.	Water
Assessment Unit / Water Name / Location Desc.	Category Cause Name	Listed	Priority	Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at	4A Escherichia coli (E. coli)	2002	L	7.53

the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.

Gold Mine Creek		Estuary	Reservoir	River
Recreation		(Sq. Miles)	(Acres)	(Miles)
	Escherichia coli (E. coli) - Total Impaired Size by Water Type:			7.53

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Grazing in Riparian or Impacts from Land Livestock (Grazing or Runoff from Shoreline Zones Forest/Grassland/Parkland Application of Wastes Feeding Operations) Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than **Unsewered Areas** Waterfowl

York River Basin

Cause Group Code: F06R-04-BAC North Anna River

Cause Location: Begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek

and begins again at the confluence with Beaver Creek and continues downstream until the confluence with Hickory

Creek.

City / County: Louisa Co. Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (19 of 34 samples - 55.9%) at DEQ station 8-NAR061.09 at Route 651. E. coli bacteria criterion excursions at citizen monitoring stations 8NAR-EX4-LACA (4 of 14 samples - 28.6%) and 8HIK-EX5-LACA (2 of 7 samples - 28.6%). E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 8-NAR066.42 at Route 639.

Escherichia coli (E. coli) - Total	Impaired Size by Water Type:				6.57
Recreation		(Sq. Miles)	(Ac	res)	(Miles)
North Anna River		Estuary	Rese	ervoir	River
VAN-F06R_NAR02A04 / North Anna River / Segment begins at the confluence with Mountain Run and continues downstream until the confluence with White Oak Creek.	5A Escherichia coli (E. coli)		2010	L	2.79
VAN-F06R_NAR01A02 / North Anna River / Segment begins at the confluence with Beaver Creek and continues downstream until the confluence with Hickory Creek.	5A Escherichia coli (E. coli)		2006	L	3.78
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-05-BAC Christopher Creek

Cause Location: Begins at an unnamed tributary to Christopher Creek and continues downstream until the confluence with Lake

Anna.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (7 of 11 samples - 63.6%) at DEQ station 8-CRC001.82 at Route 613.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

 $VAN\text{-}F06R_CRC01A10\ /\ Christopher\ Creek\ /\ Segment\ begins\ at an unnamed\ tributary\ to\ Christopher\ Creek\ and\ continues$

downstream until the confluence with Lake Anna.

Christopher CreekEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Escherichia coli (E. coli)

2010

L

1.98

1.98

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-06-BAC Hickory Creek

Cause Location: Begins at the confluence with Fox Branch and continues downstream to the confluence with the North Anna River.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-HIK001.20 at Route 669. E. coli bacteria criterion excursions (11 of 19 samples - 57.9%) at citizen monitoring station 8HIK-EX2-LACA.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cause First Dev. Water
Category Cause Name
Listed Priority Size
SAN-F06R HIK01A12 / Hickory Creek / Seament begins at the SA Escherichia coli (E. coli)
2012 L 1.72

VAN-F06R_HIK01A12 / Hickory Creek / Segment begins at the confluence with Fox Branch and continues downstream to the confluence with the North Anna River.

Hickory Creek
Recreation

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.72

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-07-BAC White Creek

Cause Location: Begins at the headwaters of White Creek and continues downstream until the confluence with Gold Mine Creek.

City / County: Louisa Co.

Unsewered Areas

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 8-WHT001.33 at Route 669. A new TMDL is not required for this impaired segment of White Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24428, 11/04/2005) included modeling, source identification, and reductions that covered the entire Goldmine Creek watershed (Eq. ID POL0240). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Goldmine Creek watershed (ID 247) was approved by the EPA on 01/09/2013.

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e rry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
<u>—</u>	te Creek / Segment begins at the d continues downstream until the ek.	4A	Escherichia coli (E. coli))	2014	L	6.05
White Creek				Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Recreation	Escherichia coli (E. coli) - Total	Impaire	d Size by Water Type:	(Oq. WillC3)	(MC	5103)	6.05
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff Forest/		nd/Parkla	ınd
Sewage Discharges in	Wastes from Pets	Water	fowl	Wildlife	Other t	han	

Waterfowl

York River Basin

Cause Group Code: F06R-08-BAC **Duckinghoe Creek**

Cause Location: Begins at the headwaters of Duckinghoe Creek and continues downstream until the confluence with Lake Anna.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (8 of 12 samples - 66.7%) at DEQ station 8-DKH001.44 at Route 613.

Cycle **TMDL** First Dev. Water Cause Listed **Priority** Assessment Unit / Water Name / Location Desc. Category Cause Name Size 6.98 2016

VAN-F06R_DKH01A04 / Duckinghoe Creek / Segment begins at the headwaters of Duckinghoe Creek and continues downstream

until the confluence with Lake Anna.

Duckinghoe Creek Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 6.98

Escherichia coli (E. coli)

Sources:

Source Unknown

York River Basin

Cause Group Code: F06R-10-BAC Hickory Creek

Cause Location: Begins at the confluence of North Fork Hickory Creek and South Fork Hickory Creek, creating Hickory Creek, and

continues downstream to the upstream portion of Lake Louisa, at Lakeshore Drive.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

Excursions from the maximum E. coli bacteria criterion (2 of 15 samples - 13.3%) at citizen monitoring station 8HIK-EX9-LACA.

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.
Cause
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
CAN-F06R HIK03A16 / Hickory Creek / Segment begins at the SA Escherichia coli (E. coli) 2018 L 0.68

VAN-F06R_HIK03A16 / Hickory Creek / Segment begins at the confluence of North Fork Hickory Creek and South Fork Hickory Creek, creating Hickory Creek, and continues downstream to the upstream portion of Lake Louisa, at Lakeshore Drive.

Hickory Creek

Recreation

Reservoir River
(Sq. Miles) (Acres) (Miles)

0.68

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F07L-01-BZOKFL Gold Mine Creek

Cause Location: Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake

Anna.

City / County: Louisa Co.
Use(s): Fish Consumption

Cause(s) / VA Category: Benzo[k]fluoranthene / 5A

2010 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 5.5 parts per billion (ppb) for benzo(k)fluoranthene were recorded in two total samples of two species of fish (largemouth bass and carp) collected in 2003 at station 8-GMC001.43.

Cycle TMDL

Assessment Unit / Water Name / Location Desc.	Caus Catego	e ory Cause Name		First Listed	Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream un the confluence with Lake Anna.		Benzo[k]fluoranthene		2010	L	7.53
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segmer includes the Gold Mine Creek arm of Lake Anna.	nt 5A	Benzo[k]fluoranthene		2010	L	91.62
Gold Mine Creek Fish Consumption			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Benzo[k]fluoranthene - Total	Impaire	d Size by Water Type:			91.62	7.53

Sources:

Source Unknown

York River Basin

Cause Group Code: F07L-01-HG Lake Anna

Cause Location: Segment includes the lower portion of Lake Anna, beginning near the northern end of the Route 690 bridge, and

continues downstream until the dam.

City / County: Louisa Co. Spotsylvania Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

2010 Assessment: Excursions above the fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in tissue from one species of fish (carp) sampled in 2003 and in tissue from one species of fish (channel catfish)

sampled in 2006 at monitoring station 8-NAR034.92.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
AN-F071 NAR01A02 / Lake Anna / Segment includes the lower 5A Mercury in Fish Tissue
2010 L ######

VAN-F07L_NAR01A02 / Lake Anna / Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge (Dike 2), and continues downstream until the dam.

Lake AnnaEstuaryReservoirRiverFish Consumption(Sq. Miles)(Acres)(Miles)

Mercury in Fish Tissue - Total Impaired Size by Water Type: 1,563.36

Sources:

Source Unknown

York River Basin

Cause Group Code: F07L-01-PAHHMW Gold Mine Creek

Cause Location: Begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna

(impairment includes the Gold Mine Creek arm).

City / County: Louisa Co.
Use(s): Fish Consumption

Cause(s) / VA Category: Benzo[a]pyrene (PAHs) / 5A

2010 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 5.5 parts per billion (ppb) for benzo(a)pyrene were recorded in two total samples of two species of fish (largemouth bass and carp) collected in 2003 at station 8-GMC001.43.

Cause Assessment Unit / Water Name / Location Desc. Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna. 5A Benzo[a]pyrene (PAHs) the confluence with Lake Anna.		2010	L	7.53
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment 5A Benzo[a]pyrene (PAHs) includes the Gold Mine Creek arm of Lake Anna.		2010	L	91.62
Gold Mine Creek	Estuary	Res	ervoir	River
Fish Consumption	(Sq. Miles)	(Ac	res)	(Miles)
Benzo[a]pyrene (PAHs) - Total Impaired Size by Water Type:				7.53

Sources:

Source Unknown

York River Basin

Cause Group Code: F07L-01-PCB Lake Anna and Contrary Creek, Goldmine Creek, and Terrys Run tributaries

Cause Location: Includes the entirety of Lake Anna, including its tributaries Terrys Run, Goldmine Creek, and Contrary Creek.

City / County: Louisa Co. Orange Co. Spotsylvania Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A

Polychlorinated Biphenyls (PCBs) / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 6/15/04 and modified 12/13/04 and 08/31/07, limits consumption of bluegill sunfish, carp, channel catfish, largemouth bass, striped bass, white catfish, and white perch to no more than two meals per month. The advisory also bans the consumption of gizzard shad. The affected area includes the entirety of Lake Anna and its tributaries Contrary Creek, Gold Mine Creek, and Terrys Run.

2014 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in fish tissue were recorded in five species of fish (largemouth bass, carp, channel catfish, and white catfish) in samples collected in 2008 at monitoring station 8-GMC001.43.

	Cause		Cycle First	TMDL Dev.	Water
Assessment Unit / Water Name / Location Desc.	Catego	ry Cause Name	Listed	Priority	Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.	5A	PCBs in Fish Tissue	2006	L	7.53
VAN-F07L_CON01A02 / Lake Anna/Contrary Creek / Segment includes most of the Contrary Creek arm of Lake Anna, beginning around rivermile 3.53 and continuing downstream until the confluence with the main portion of Lake Anna.	5A	PCBs in Fish Tissue	2002	L	445.19
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	PCBs in Fish Tissue	2002	L	27.87
VAN-F07L_FRC01A04 / Lake Anna/Freshwater Creek / Segment includes the Freshwater Creek arm of Lake Anna.	5A	PCBs in Fish Tissue	2006	L	50.67
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment includes the Gold Mine Creek arm of Lake Anna.	5A	PCBs in Fish Tissue	2002	L	91.62
VAN-F07L_NAR01A02 / Lake Anna / Segment includes the lower portion of Lake Anna (lacustrine), beginning near the northern end of the Route 690 bridge (Dike 2), and continues downstream until the dam.	5A	PCBs in Fish Tissue	2002	L	######
VAN-F07L_NAR02A02 / Lake Anna / Segment begins at the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68), and continues downstream until the northern end of the Route 690 bridge.	5A	PCBs in Fish Tissue	2006	L	######
VAN-F07L_NAR03A02 / Lake Anna / Segment includes the upper portion North Anna River portion of Lake Anna, beginning at the boundary of F07, and continues downstream until the start of the lacustrine waters of Lake Anna (0.7 miles upstream from 8-NAR044.68).	5A	PCBs in Fish Tissue	2006	L	######
VAN-F07L_NAR04A06 / Lake Anna / Segment includes the upper portion North Anna River of Lake Anna beginning at the start of the inundated waters of the North Anna River downstream until the boundary of the F06 watershed.	5A	PCBs in Fish Tissue	2006	L	######

mpaire	d Size by Water Type		1,2	33.83	
tributar	ies	Estuary (Sq. Miles)			River (Miles)
5A	Polychlorinated Bipher	yls (PCBs)	2010	L	431.0
5A	Polychlorinated Bipher	yls (PCBs)	2010	L	802.7
			Cycle First Listed	TMDL Dev. Priority	Wate Size
Impaire	d Size by Water Type		9,59	96.81	23.06
i ilibutai	165				River (Miles)
			2006	L	4.3 5.5
5A	PCBs in Fish Tissue		2006	L	3.6
5A	PCBs in Fish Tissue		2006	L	1.9
5A	PCBs in Fish Tissue		2006	L	431.0
	PCBs in Fish Tissue		2006	L	471.8
5A	PCBs in Fish Tissue		2006	L	802.7
5A	PCBs in Fish Tissue		2006	L	109.0
	t 5A t 5A g 5A 5A 5A tributar Impaired Cause Catego t 5A 5A	t 5A PCBs in Fish Tissue 6 SA PCBs in Fish Tissue 6 Tributaries Impaired Size by Water Type: Cause Category Cause Name t 5A Polychlorinated Biphen 5A Polychlorinated Biphen 1 tributaries	5A PCBs in Fish Tissue 6 SA PCBs in Fish Tissue 6 Tributaries Estuary (Sq. Miles) Impaired Size by Water Type: Cause Category Cause Name 1 SA Polychlorinated Biphenyls (PCBs) 5A Polychlorinated Biphenyls (PCBs)	t 5A PCBs in Fish Tissue 2006 CAUSE Estuary (Sq. Miles) (According to the property of	t 5A PCBs in Fish Tissue 2006 L 6 SA PCBs in Fish Tissue 2006 L 6 SA PCBs in Fish Tissue 2006 L 7 Tributaries Estuary (Sq. Miles) (Acres) 6 Cause Category Cause Name Category Category Cause Name Category Category Cause Name Category Category Category Cause Name Category Ca

Sources:

Source Unknown

York River Basin

Cause Group Code: F07L-02-PAHHMW Gold Mine Creek

Cause Location: Begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna

(impairment includes the Gold Mine Creek arm).

City / County: Louisa Co.
Use(s): Fish Consumption

Cause(s) / VA Category: Benzo[b]fluoranthene / 5A

2010 Assessment: Exceedances of the water quality criterion based fish tissue value (TV) of 5.5 parts per billion (ppb) for benzo(b)fluoranthene were recorded in two total samples of two species of fish (largemouth bass and carp) collected in 2003 at station 8-GMC001.43.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F06R_GMC01A00 / Gold Mine Creek / Segment begins at the headwaters of Gold Mine Creek and continues downstream until the confluence with Lake Anna.	ene	2010	L	7.53
VAN-F07L_GMC01A02 / Lake Anna/Gold Mine Creek / Segment 5A Benzo[b]fluoranthe includes the Gold Mine Creek arm of Lake Anna.	ene	2010	L	91.62
Gold Mine Creek	Estuary	Res	ervoir	River
Fish Consumption	(Sq. Miles)	(Ac	res)	(Miles)
Benzo[b]fluoranthene - Total Impaired Size by Water Ty	ype:	!	91.62	7.53

Sources:

Source Unknown

York River Basin

Cause Group Code: F07R-01-BAC Pamunkey Creek

Cause Location: Begins at the confluence of Tomahawk Creek and Church Creek, forming Pamunkey Creek, and continues

downstream until the impounded waters of Lake Anna.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (23 of 34 samples - 67.6%) at station 8-PMC009.85 at Route 651. E. coli bacteria criterion excursions (2 of 4 samples - 50.0%) at citizen monitoring station 8PMC-P6-LACA (2018 Assessment).

The York Basin Watersheds around Lake Anna bacteria TMDL for the Pamunkey Creek watershed (Eq. ID POL0237) was approved by the EPA on 11/04/2005 (Fed ID 24430). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
	nunkey Creek / Segment begins at k and continues downstream until th		Escherichia coli (E. coli)		1998	L	5.49
	nunkey Creek / Segment begins at Creek and Church Creek, where continues downstream until the	4A	Escherichia coli (E. coli)		1998	L	7.21
Pamunkey Creek				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Total	Impaire	d Size by Water Type:				12.70
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff f		nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Water	fowl	Wildlife Waterfo		han	

York River Basin

Cause Group Code: F07R-01-BEN Pamunkey Creek

Cause Location: Begins at the confluence of Tomahawk Creek and Church Creek, forming Pamunkey Creek, and continues

downstream until the confluence with Clear Creek.

City / County: Orange Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2016 Assessment: Two biological monitoring events in 2010 at station 8-PMC014.75 at Route 630 resulted in a VSCI

assessment that indicates an impaired macroinvertebrate community.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F07R_PMC02A02 / Pamunkey Creek / Segment begins at the confluence with Tomahawk Creek and Church Creek, where Pamunkey Creek begins, and continues downstream until the confluence with Clear Creek.

5A Benthic Macroinvertebrates 2012 L 7.21 Bioassessments

Pamunkey Creek

Aquatic Life

Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

7.21

Sources:

Source Unknown

York River Basin

Cause Group Code: F07R-02-BAC Terrys Run

Cause Location: Begins at the confluence with Horsepen Branch and continues downstream until the confluence with Lake Anna.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (11 of 29 samples - 37.9%) at station 8-TRY004.98 at Route 629. E. coli bacteria criterion excursions at citizen monitoring stations 8TRY-T3-LACA (4 of 4 samples - 100.0%; 2018 assessment) and 8TRY-37-LACA (4 of 24 samples - 16.7%).

The York Basin Watersheds around Lake Anna bacteria TMDL for the Terrys Run watershed (Eq. ID POL0235) was developed and approved by the EPA on 11/04/2005 (Fed ID 24432). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013.

confluence with Riga Run and continues downstream until the confluence with Lake Anna. VAN-F07R_TRY02A02 / Terrys Run / Segment begins at the confluence with Horsepen Branch and continues downstream until the confluence with Riga Run. Terrys Run Recreation Reservoir (Acres) Rive (Miles)	Assessment Unit / Water I	Name / Location Desc.	Cause Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
confluence with Horsepen Branch and continues downstream until the confluence with Riga Run. Terrys Run Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: Sources: Grazing in Riparian or Shoreline Zones Application of Wastes Feeding Operations) Sewage Discharges in Wastes from Pets Estuary (Sq. Miles) (Acres) Rive (Acres) (Miles) Estuary (Sq. Miles) (Acres) (Miles) (Acres) (Acres) (Miles) (Acres) (Acres) (Miles) (Acres) (Acres) (Acres) (Miles) (Acres) (confluence with Riga Run and		4A	Escherichia coli (E. coli)		1998	L	1.98
Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: Sources: Grazing in Riparian or Shoreline Zones Application of Wastes Feeding Operations) Sewage Discharges in Wastes from Pets Waterfowl (Sq. Miles) (Acres) (Miles) (Acres) (Miles	confluence with Horsepen Bran	3 3		Escherichia coli (E. coli)		2006	L	3.67
Escherichia coli (E. coli) - Total Impaired Size by Water Type: Sources: Grazing in Riparian or Shoreline Zones Application of Wastes Feeding Operations) Sewage Discharges in Wastes from Pets Waterfowl Escherichia coli (E. coli) - Total Impaired Size by Water Type: 5.6 Runoff from Forest/Grassland/Parkland Wildlife Other than	Terrys Run				Estuary	Res	ervoir	River
Sources: Grazing in Riparian or Shoreline Zones Application of Wastes Feeding Operations) Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than	Recreation				(Sq. Miles)	(Ad	cres)	(Miles)
Grazing in Riparian or Impacts from Land Livestock (Grazing or Shoreline Zones Application of Wastes Feeding Operations) Runoff from Forest/Grassland/Parkland Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than		Escherichia coli (E. coli) - Tota	al Impaire	d Size by Water Type:				5.65
Shoreline Zones Application of Wastes Feeding Operations) Forest/Grassland/Parkland Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than	Sources:							
Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than	Grazing in Riparian or	Impacts from Land	Livest	ock (Grazing or	Runoff	from		
g	Shoreline Zones	Application of Wastes	Feedir	ng Operations)	Forest/0	Grassla	nd/Parkla	nd
	o o	Wastes from Pets	Water	fowl			han	

York River Basin

Cause Group Code: F07R-03-BAC Plentiful Creek

Cause Location: Begins at the confluence with an unnamed tributary to Plentiful Creek, upstream from the Route 601 bridge, and

continues downstream until the confluence with Lake Anna.

City / County: Spotsylvania Co.

Unsewered Areas

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (7 of 12 samples - 58.3%) at DEQ station 8-PLT002.82 at Route 653.

The York Basin Watersheds around Lake Anna bacteria TMDL for the Plentiful Creek watershed (Eq. ID POL0236) was approved by the EPA on 11/04/2005 (Fed ID 24429). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Plentiful Creek watershed (ID 198) was approved by the EPA on 01/09/2013.

Assessment Unit / Wat	ter Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
confluence with an unnamed	entiful Creek / Segment begins at the d tributary to Plentiful Creek, upstream and continues downstream until the	4A Escherichia coli (E. coli)		1998	L	3.30
Plentiful Creek			Estuary	Res	ervoir	River
Recreation			(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Total	Impaired Size by Water Type:				3.30
Sources:						
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff f		nd/Parkla	nd
Sewage Discharges in	Wastes from Pets	Waterfowl	Wildlife	Other t	han	

Waterfowl

York River Basin

Cause Group Code: F07R-04-BAC Tomahawk Creek

Cause Location: Begins at the headwaters of Tomahawk Creek and continues downstream until the confluence with Church Run.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8THK-P10-LACA.

A new TMDL is not required for this impaired segment of Tomahawk Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Escherichia coli (E. coli) - Toi	tal Impaired Size by Water Type:				3.84
Tomahawk Creek Recreation		Estuary (Sq. Miles)		ervoir res)	River (Miles)
VAN-F07R_THK01A02 / Tomahawk Creek / Segment begins the headwaters of Tomahawk Creek and continues downstream the confluence with Church Run.			2014	L	3.84
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-05-BAC Berry Run

Cause Location: Begins at the headwaters of Berry Run and continues downstream until the confluence with Clear Creek.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (3 of 4 samples - 75.0%) at citizen monitoring station 8BRY-P4-LACA and E. coli bacteria criterion excursions (2 of 4 samples - 50.0%) at citizen monitoring station 8BRY-P8-LACA.

A new TMDL is not required for this impaired segment of Berry Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Cycle TMDL

		Cause			First	Dev.	Water
Assessment Unit / Water N	lame / Location Desc.	Catego	ry Cause Name		Listed	Priority	Size
VAN-F07R_BRY01A06 / Berry confluence with Little Creek and confluence with Clear Creek.	0 0	4A	Escherichia coli (E. coli)		2006	L	2.34
VAN-F07R_BRY02A14 / Berry headwaters of Berry Run and co-confluence with Little Creek.		4A	Escherichia coli (E. coli)		2014	L	2.96
Berry Run				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ad	cres)	(Miles)
	Escherichia coli (E. coli) - Tota	I Impaired	d Size by Water Type:				5.30
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff f		nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Water	fowl	Wildlife Other than Waterfowl		han	

York River Basin

Cause Group Code: F07R-06-BAC Terrys Run

Cause Location: Begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch.

City / County: Orange Co. Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 11 samples - 27.3%) at DEQ station 8-TRY010.80 at Route 692.

A new TMDL is not required for this impaired segment of Terrys Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013

Assessment Unit / Water Name / Location Desc. VAN-F07R_TRY03A08 / Terrys Run / Segment begins at the headwaters of Terrys Run and continues downstream until the confluence with Horsepen Branch. Cause Category Cause Name Listed Priority S 4A Escherichia coli (E. coli) 2010 L Estuary Reservoir Rio	Escherichia coli (E. coli) - Tota	I Impaired Size by Water Type:				4.36
Cause Category Cause Name VAN-F07R_TRY03A08 / Terrys Run / Segment begins at the headwaters of Terrys Run and continues downstream until the Cause Category Cause Name Listed Priority S 4A Escherichia coli (E. coli) 2010 L	•		,			River (Miles)
Cause First Dev. W	headwaters of Terrys Run and continues downstream until the	4A Escherichia coli (E. coli)	2010	L	4.36
Cycle TMDI	Assessment Unit / Water Name / Location Desc.					Water Size

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-07-BAC Clear Creek

Cause Location: Begins at the outlet of Lake Orange and continues downstream to the confluence with Berry Run.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (3 of 4 samples - 75.0%) at citizen monitoring station 8CLC-P5-LACA.

A new TMDL is not required for this impaired segment of Church Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Assessment Unit / Water	Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
_	r Creek / Segment begins at the inues downstream to the confluen	•	oli)	2014	L	2.44
Clear Creek			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Recreation	Escherichia coli (E. coli) - To	tal Impaired Size by Water Type	· · · /	(/ 10	5100)	2.44
Sources:						
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff Forest/		nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Waterfo		han	

York River Basin

Cause Group Code: F07R-08-BAC Riga Run

Cause Location: Begins at the headwaters of Riga Run and continues downstream until the confluence with Terrys Run.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-RIG004.52 at Route 650.

A new TMDL is not required for this impaired segment of Riga Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013.

Assessment Unit / Water Na	me / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_RIG01A02 / Riga Ru headwaters of Riga Run and cont confluence with Terrys Run.	3	4A Escherichia coli (E. coli)		2014	L	7.36
Riga Run			Estuary		ervoir	River
Recreation			(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - To	tal Impaired Size by Water Type:				7.36
Sources:						
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff f		nd/Parkla	nd
0 5: 1 :	W (D)	101 1 1	144.1 11.6	0.1		

Grazing in Riparian or	Impacts from Land	Livestock (Grazing or Feeding Operations)	Runoff from
Shoreline Zones	Application of Wastes		Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-09-BAC Rocky Run

Cause Location: Begins at the headwaters of Rocky Run and continues downstream until the confluence with Terrys Run.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8ROC-T5-LACA and (3 of 4 samples - 75.0%) at citizen monitoring station 8ROC-T8-LACA.

A new TMDL is not required for this impaired segment of Rocky Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24432, 11/04/2005) included modeling, source identification, and reductions that covered the entire Terrys Run watershed (Eq. ID POL0235). The Upper York River bacteria TMDL Implementation Plan for the Terrys Run watershed (ID 248) was approved by the EPA on 01/09/2013

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07R_ROC01A10 / Rocky Run / Segment begins at the headwaters of Rocky Run and continues downstream until the confluence with Terrys Run.	4A Escherichia coli (E. coli)		2014	L	2.40
Rocky Run Recreation		Estuary (Sq. Miles)		ervoir cres)	River (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

2.40

Sources:

ources:			
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-10-BAC Church Run

Cause Location: Begins at Taylors Pond and continues downstream until the confluence with Tomahawk Creek.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8CHR-P9-LACA.

A new TMDL is not required for this impaired segment of Church Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Cycle **TMDL** Cause First Dev. Water **Priority** Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Size Escherichia coli (E. coli) L VAN-F07R CHR01A14 / Church Run / Segment begins at Taylors 4A 2014 0.71 Pond and continues downstream until the confluence with Tomahawk Creek. Church Run Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

0.71

Sources:

Grazing in Riparian or Shoreline Zones Sewage Discharges in Unsewered Areas Impacts from Land Application of Wastes Wastes from Pets Livestock (Grazing or Feeding Operations) Waterfowl

Runoff from Forest/Grassland/Parkland Wildlife Other than

Waterfowl

York River Basin

Cause Group Code: F07R-11-BAC Little Creek

Cause Location: Begins at the headwaters of Little Creek and continues downstream until the confluence of Berry Run.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions at citizen monitoring stations 8LIT-P7-LACA (7 of 15 samples - 46.7%) and 8LIT-P13-LACA (2 of 14 samples - 14.3%).

A new TMDL is not required for this impaired segment of Little Creek because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The SWCB approved the TMDL on 09/27/2006. The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Escherichia coli (E. coli) - Tota	al Impaired Size by Water Type:				2.14
Little Creek Recreation		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
VAN-F07R_LIT01A14 / Little Creek / Segment begins at the headwaters of Little Creek and continues downstream until the confluence of Berry Run.	4A Escherichia coli (E. coli)		2014	L	2.14
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F07R-12-BAC Poor House Run

Cause Location: Begins at the headwaters of Poor House Run and continues downstream until the confluence with Tomahawk

Creek.

City / County: Orange Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 4 samples - 100.0%) at citizen monitoring station 8PHC-P12-

LACA.

A new TMDL is not required for this impaired segment of Poor House Run because the downstream York Basin Watersheds around Lake Anna bacteria TMDL (Fed ID 24430, 11/04/2005) included modeling, source identification, and reductions that covered the entire Pamunkey Creek watershed (Eq. ID POL0237). The Upper York River bacteria TMDL Implementation Plan for the Pamunkey Creek watershed (ID 249) was approved by the EPA on 01/09/2013.

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.
Cause
Cause First Dev. Water
Cause Name
Listed Priority Size
Category Phone Phone

VAN-F07R_PHC01A14 / Poor House Run / Segment begins at the 4A Escherichia coli (E. coli) headwaters of Poor House Run and continues downstream until the confluence with Tomahawk Creek.

Poor House Run
Recreation

Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 3.51

Sources:

Grazing in Riparian or Shoreline Zones Application of Wastes Feeding Operations)

Sewage Discharges in Wastes from Pets Waterfowl

Wastes from Pets Waterfowl

Waterfowl

Runoff from Forest/Grassland/Parkland

Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F08R-01-CD Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially

into the inundated waters of Lake Anna.

City / County: Louisa Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Cadmium / 5A

A total of two exceedances of the freshwater acute criterion for cadmium were recorded in 2017 and 2018 at DEQ station 8-

CON005.38 at Route 522.

Cadmium - Total I	mpaire	d Size by Water Type:			55.74	11.04
Contrary Creek Wildlife			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
	5A	Cadmium		2008	М	5.52
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A e 5A	Cadmium Cadmium		2008	M	27.87 5.52
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Cadmium		2008	M M	27.87
Assessment Unit / Water Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-CU Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially

into the inundated waters of Lake Anna.

City / County: Louisa Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Copper / 5A

A total of three exceedances of the freshwater acute criterion for copper were recorded in 2017 and 2018 at DEQ stations 8-CON005.38 (at Route 522) and 8-CON006.12 (at 0.6 mile upstream from Route 522).

Copper - Total	Impaire	d Size by Water Type:		:	55.74	11.04
Contrary Creek Wildlife			Estuary (Sq. Miles)		ervoir eres)	River (Miles)
	5A	Copper		2008	М	5.52
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.	5A e 5A	Copper Copper		2008	M M	27.87 5.52
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Copper		2008	M	27.87
Assessment Unit / Water Name / Location Desc.	Caus Catego	e Dry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-PH Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially

into the inundated waters of Lake Anna.

City / County: Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

Excursions less than the lower limit of the pH criterion range (36 of 36 samples - 100.0%) at station 8-CON005.38.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A pH		2008	М	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.			2002	М	5.52
Contrary Creek Aquatic Life		Estuary (Sq. Miles)		ervoir res)	River (Miles)
pH - Total	Impaired Size by Water Type:		:	27.87	5.52

Sources:

Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F08R-01-ZN Contrary Creek

Cause Location: Begins at the headwaters of Contrary Creek and continues downstream until approximately rivermile 3.53, partially

into the inundated waters of Lake Anna.

City / County: Louisa Co.

Use(s): Aquatic Life Wildlife

Cause(s) / VA Category: Zinc / 5A

A total of four exceedances of the freshwater acute criterion for zinc were recorded in 2017 and 2018 at DEQ stations 8-

CON005.38 (at Route 522) and 8-CON006.12 (at 0.6 mile upstream from Route 522).

Assessment Unit / Water Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F07L_CON02A08 / Lake Anna/Contrary Creek / Segment includes the remainder of the Contrary Creek arm of Lake Anna, beginning at the start of the inundated waters and continuing downstream until around rivermile 3.53.	5A	Zinc		2008	М	27.87
	5A	Zinc		2008	М	27.87
VAN-F08R_CON01A00 / Contrary Creek / Segment begins at the headwaters of Contrary Creek and continues downstream until the confluence with Lake Anna.		Zinc		2008	М	5.52
	5A	Zinc		2008	М	5.52
Contrary Creek Aquatic Life			Estuary (Sq. Miles)		ervoir eres)	River (Miles)
Zinc - Tota	l Impaire	d Size by Water Type:	:		55.74	11.04

Sources:

Impacts from Abandoned Mine Lands (Inactive)

York River Basin

Cause Group Code: F09R-01-BAC Northeast Creek

Cause Location: Begins at the headwaters of Northeast Creek and continues downstream until the confluence with another

unnamed tributary to Northeast Creek, approximately 0.67 rivermiles upstream from Route 622.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-NST007.84 at Route 614. E. coli bacteria criterion excursions (4 of 23 samples - 17.4%) at DEQ station 8-NST011.67 (2016 Assessment).

The Pamunkey River Basin bacteria TMDL for the Northeast Creek watershed was approved by the EPA on 08/2/2006. The modified Pamunkey River and Tributaries bacteria TMDL for the Northeast Creek watershed (Eq ID 1159) was approved by the EPA on 04/27/2015 (Federal ID 64652).

Assessment Unit / Water I	Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
confluence with an unnamed tri approximately 0.67 rivermiles u		he 4A	Escherichia coli (E. coli	i)	2008	L	1.09
confluence with an unnamed tri rivermile 9.39, and continues do	ownstream until the confluence with ortheast Creek, approximately 0.67	1	Escherichia coli (E. coli	i)	2006	L	6.36
confluence of Knights Branch w Creek, and continues downstre	neast Creek / Segment begins at the vith Music Branch, forming Northeast am until the confluence with an Creek, approximately 2.28 rivermiles.	st	Escherichia coli (E. coli	i)	2012	L	3.52
Northeast Creek				Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Recreation	Escherichia coli (E. coli) - Total	Impaire	d Size by Water Type:	,		,	10.97
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff f Forest/0		nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Water	fowl	Wildlife Waterfo	•	han	

York River Basin

Cause Group Code: F09R-02-BAC Music Branch

Cause Location: Begins at the headwaters of Music Branch and continues downstream until the confluence with Northeast Creek.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 3-MUS000.57 at Route 677.

This impairment was originally nested in the Pamunkey River Basin bacteria TMDL for the South Anna River (F04R-01) watershed (Federal ID 24448, 8/2/2006). The modified Pamunkey River and Tributaries bacteria TMDL for the Northeast Creek watershed was approved by the EPA on 4/27/2015. A new TMDL is not required for this impaired segment of Music Branch because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 64652) included modeling, source identification, and reductions that covered the entire Northeast Creek watershed (Eq. ID 1159).

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
-	ic Branch / Segment begins at the nd continues downstream until the ek.	4A	Escherichia coli (E. coli)		2008	L	3.56
Music Branch Recreation				Estuary (Sq. Miles)		ervoir cres)	River (Miles)
	Escherichia coli (E. coli) - Total	Impaired	Size by Water Type:				3.56
Sources:							
Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes		ock (Grazing or ng Operations)	Runoff f	. •	nd/Parkla	nd
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterf	fowl	Wildlife Waterfo	•	han	

York River Basin

Cause Group Code: F09R-02-BEN XHS - North Anna River, UT

Cause Location: Unnamed Tributary XHS from its headwaters to its mouth at the North Anna River

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

The unnamed tributary was assessed as not supporting of the Aquatic Life Use in the 2008 cycle due to impairment of the benthic community at station 8-XHS000.72.

It was confirmed by benthic monitoring at 8-XHS000.72 in 2011. Additional 2011 and 2012 benthic monitoring at 8-XHS000.49 also showed benthic community impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause	Name	First Listed	Dev. Priority	Water Size
VAP-F09R_XHS01A08 / XHS - North Anna River, UT / Unname Tributary XHS from its headwaters to its mouth at the North Anna River	ed 5A Benthic M Bioasses	lacroinvertebrates sments	2008	L	1.09
XHS - North Anna River, UT Aguatic Life		Estuary (Sg. Miles)		ervoir res)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Tota	I Impaired Size by	Nater Type:	•	,	1.09

Sources:

Industrial Point Source

Source Unknown

Discharge

York River Basin

Cause Group Code: F09R-03-PH XIM - North Anna River, UT

Cause Location: Unnamed Tributary XIM from its mouth at the North Anna River to the first tributary (near Chandler Crossing)

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2010 cycle, the tributary was assessed as not supporting of the Aquatic Life Use due to a pH exceedance rate of 2/2 at freshwater probabilistic monitoring station 8-XIM000.53.

Additional monitoring was conducted during the 2016 cycle; the exceedance rate was 2/12.

Cause Assessment Unit / Water Name / Location Desc. Category Cause Na	ame	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_XIM01A10 / North Anna, UT / Mouth upstream to first 5C pH tributary (near Chandler Crossing)		2010	L	0.70
XIM - North Anna River, UT Aguatic Life	Estuary (Sq. Miles)		ervoir eres)	River (Miles)
pH - Total Impaired Size by Wat	ter Type:			0.70

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F09R-04-BAC Mill Creek

Cause Location: Mill Creek in its entirety.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, Mill Creek was impaired of the Recreation Use due to an E. coli violation rate of 7/13 at the Route 652

bridge (8-MLL001.19).

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on

4/27/2015. The impairment is considered Category 4A.

Cycle **TMDL** Cause First Dev. Water Assessment Unit / Water Name / Location Desc. Listed Priority Size Category Cause Name VAP-F09R MLL01A12 / Mill Creek / Headwaters to mouth at the Escherichia coli (E. coli) 2012 4.37 North Anna River

Mill Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation 4.37

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F09R-04-PH Mill Creek

Cause Location: Mill Creek in its entirety.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Mill Creek was impaired of the Aquatic Life Use due to a pH violation rate of 5/13 at the Route 652

bridge (8-MLL001.19).

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F09R MLL01A12 / Mill Creek / Headwaters to mouth at the 5C pH 2012 L 4.37 North Anna River

Mill Creek

Aquatic Life

Estuary (Sq. Miles)

PH - Total Impaired Size by Water Type:

River (Miles)

At 37

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F09R-05-PH XJP - North Anna River, UT

Cause Location: Headwaters to mouth

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2016 cycle, tributary XJP was impaired of the Aquatic Life Use due to a pH exceedance rate of 6/7 at station 8-

XJP000.01, which is located 15 meters above the mouth.

Cause Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAP-F09R_XJP01A14 / XJP - North Anna River, UT / Headwaters 5C pH 2016 L 1.01
to mouth at XBU

XJP - North Anna River, UT

Aquatic Life

pH - Total Impaired Size by Water Type:

Estuary (Sq. Miles)

Reservoir (Miles)

River (Miles)

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F09R-06-BAC North Anna River

Cause Location: The North Anna River from Bull Run downstream to the Little River.

City / County: Caroline Co. Hanover Co. Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2016 cycle, the North Anna River from Bull Run to the mouth was impaired of the Recreation Use due to an E. coli exceedance rate of 8/59 at station 8-NAR005.42, which is located at the Route 30 bridge (Morris Bridge).

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015; therefore, the segment is considered Category 4A.

The exceedance rate was 9/76 in the 2020 cycle.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F09R_NAR01A00 / North Anna River / From Bull Run to the Doswell PWS intake approximately 0.5 mi upstream of the Rte. 30 bridge.)	2016	L	1.73
VAP-F09R_NAR02A00 / North Anna River / From the Doswell 4A Escherichia coli (E. coli PWS intake approximately 0.5 mi. upstream of the Route 30 bridge to the confluence with the Little River.)	2016	L	2.42
North Anna River	Estuary		ervoir	River
Recreation	(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				4.15

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F09R-07-BAC **Unnamed tributary to Northeast Creek**

Cause Location: Begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the

confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion (3 of 12 samples - 25.0%) at DEQ station 8-XIA000.89 at Route 659.

A new TMDL is not required for this impaired segment of Northeast Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 64652, 04/27/2015) included modeling, source identification, and reductions that covered

the entire Northeast Creek watershed (Eq. ID 1159).

	Cause)	Cycle First	TMDL Dev.	Water
Assessment Unit / Water Name / Location Desc.	Catego	ry Cause Name	Listed	Priority	Size
'AN-F09R_XIA01A06 / Unnamed tributary to Northeast Creek /	4A	Escherichia coli (E. coli)	2016	L	3.00

VAN-F09R_XIA01A06 / Unnamed tributary to Northeast Creek / Segment begins at the headwaters of an unnamed tributary to Northeast Creek and continues downstream until the confluence with Northeast Creek, approximately 0.46 rivermiles upstream from the Route 208 crossing.

Unnamed tributary to Northeast Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 3.00

Sources:

Grazing in Riparian or Shoreline Zones	Impacts from Land Application of Wastes	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F10R-01-BAC Little River

Cause Location: Begins at the confluence with Hawkins Creek and continues downstream until the confluence with Locust Creek.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (8 of 34 samples - 23.5%) at DEQ station 8-LTL030.55 at Route 654 (Signboard Road).

The Pamunkey River and Tributaries bacteria TMDL for the Upper Little River watershed (EQ ID 1160) was approved by the EPA on 4/27/2015 (Fed ID 65140). The SWCB approved the TMDL on 12/11/2014.

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.
Cause
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size

(AN-F10R LTI 01A02 / Little River / Segment begins at the A Escherichia coli (E. coli) 2006 L 4.17

VAN-F10R_LTL01A02 / Little River / Segment begins at the confluence with Hawkins Creek and continues downstream until the confluence with Locust Creek.

Little RiverEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 4.17

Sources:

Grazing in Riparian or Shoreline Zones Livestock (Grazing or Feeding Operations)

Wastes from Pets Waterfowl

Livestock (Grazing or Feeding Operations)

Runoff from Forest/Grassland/Parkland

Unsewered Areas

Wildlife Other than

Waterfowl

York River Basin

Cause Group Code: F10R-02-BAC Little River

Cause Location: Begins at the outlet from Swift Millpond and continues downstream until the confluence with Long Creek.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-LTL035.32 at Route 609.

A new TMDL is not required for this impaired segment of Long Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

TMDL Cycle First Dev. Water Cause Listed **Priority** Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAN-F10R LTL02A04 / Little River / Segment begins at the outlet Escherichia coli (E. coli) 2014 1.29 from Swift Millpond and continues downstream until the confluence with Long Creek.

Little River Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation 1.29

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Livestock (Grazing or Grazing in Riparian or Shoreline Zones Feeding Operations)

Wastes from Pets Waterfowl Wildlife Other than Waterfowl

Runoff from Sewage Discharges in Forest/Grassland/Parkland **Unsewered Areas**

York River Basin

Cause Group Code: F10R-02-DO **Long Creek**

Cause Location: Begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.

City / County: Louisa Co. Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5A

2018 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 10 samples - 20.0%) at station 8-

LNG000.94 at Route 655.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Dissolved Oxygen

Cycle **TMDL** First Dev. Water Listed Priority Size

L

VAN-F10R_LNG01A14 / Long Creek / Segment begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.

Estuary (Sq. Miles)

Reservoir (Acres)

2014

River (Miles)

5.15

Dissolved Oxygen - Total Impaired Size by Water Type:

5.15

Sources:

Long Creek

Aquatic Life

Source Unknown

York River Basin

Cause Group Code: F10R-03-BAC **Long Creek**

Cause Location: Begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.

City / County: Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-LNG000.94 at Route 655.

A new TMDL is not required for this impaired segment of Long Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

Assessment Unit / Water Name / Location Desc.

TMDL Cycle First Dev. Water Cause Listed **Priority** Size Category Cause Name

2014

5.15

VAN-F10R_LNG01A14 / Long Creek / Segment begins at the headwaters of Long Creek and continues downstream until the confluence with Little River.

Estuary Reservoir River

(Sq. Miles) (Acres) (Miles) 5.15

Escherichia coli (E. coli)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Long Creek

Recreation

Livestock (Grazing or Sewage Discharges in Grazing in Riparian or Runoff from Shoreline Zones Forest/Grassland/Parkland **Unsewered Areas** Feeding Operations) Wastes from Pets Waterfowl Wildlife Other than

Waterfowl

York River Basin

Cause Group Code: F11R-01-BAC Little River

Cause Location: The Little River from its confluence with Locust Creek downstream to the confluence with Beaverdam Creek.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2008 cycle, the segment was assessed as not supporting of the Recreation Use due to E. coli violations at the Route 715 bridge (8-LTL024.86). Additional monitoring at station 8-LTL018.80 in the 2012 cycle confirmed the impairment with a violation rate of 3/12. The violation rate at 8-LTL024.86 was 3/15 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_LTL01B08 / Little River / From Locust Creek 4A Escherichia coli (E. col downstream to Fulcher Millpond dam.	i)	2008	L	6.29
VAP-F11R_LTL02B14 / Little River / Locust Creek from Fulcher 4A Escherichia coli (E. col Millpond dam downstream to Beaverdam Creek.	i)	2008	L	4.21
Little River	Estuary	Res	ervoir	River
Recreation	(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				10.50

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F11R-01-BEN **Locust Creek**

Cause Location: Begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.

City / County: Hanover Co. Louisa Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2014 Assessment: Two biological monitoring events in 2007 at DEQ station 8-LOC002.00 (0.9 miles upstream from Route 608)

resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Cycle **TMDL** First Dev. Cause Water Listed Priority Category Cause Name Size Assessment Unit / Water Name / Location Desc. 5A Benthic Macroinvertebrates 2010 L VAN-F11R_LOC01A06 / Locust Creek / Segment begins at the 6.59 Bioassessments

headwaters to of Locust Creek and continues downstream until the confluence with Little River.

Locust Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life** 6.59

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F11R-01-DO Little River

Cause Location: The Little River from its confluence with Locust Creek downstream to the Fulcher Millpond dam.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5A

During the 2008 cycle, the Little River from Locust Creek downstream to Beaverdam Creek was assessed as not supporting of the Aquatic Life Use due to a dissolved oxygen violation rate of 2/9 at the Route 715 bridge (8-LTL024.86).

During the 2012 cycle, additional monitoring within the segment at station 8-LTL018.80 was acceptable; therefore, further monitoring was recommended.

The original listing station 8-LTL024.86 was subsequently monitored during the 2014 cycle. A dissolved oxygen impairment was confirmed with an exceedance rate of 10/16. The segment was shortened to end at the Fulcher Millpond dam because of the acceptable downstream dissolved oxygen levels and because of the probable impact caused by backwatering from the dam. The downstream segment was partially delisted.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F11R_LTL01B08 / Little River / From Locust Creek downstream to Fulcher Millpond dam.	5A Dissolved Oxygen		2008	L	6.29
Little River Aquatic Life		Estuary (Sq. Miles)		ervoir eres)	River (Miles)
Dissolved Oxygen - 7	Total Impaired Size by Water Type:				6.29

Sources:

Dam or Impoundment Source Unknown

York River Basin

Cause Group Code: F11R-02-BAC **Beaverdam Creek**

Cause Location: Beaverdam Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Recreation Use due to an E. coli violation rate

of 4/9 at the Route 601 bridge (8-BDC000.05).

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on

12/11/2014 and by the EPA on 4/27/2015.

Cycle **TMDL** First Dev. Water Cause Assessment Unit / Water Name / Location Desc. Listed Priority Size Category Cause Name VAP-F11R BDC01A12 / Beaverdam Creek / Headwaters to mouth 4A Escherichia coli (E. coli) 2012 8.47

at the Little River

Beaverdam Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

8.47

Sources:

Municipal Point Source

Non-Point Source

Discharges

York River Basin

Cause Group Code: F11R-02-PH **Beaverdam Creek**

Cause Location: Beaverdam Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

During the 2012 cycle, Beaverdam Creek was assessed as not supporting of the Aquatic Life Use due to a pH violation rate of

3/10 at the Route 601 bridge (8-BDC000.05).

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F11R BDC01A12 / Beaverdam Creek / Headwaters to mouth 5A pH 2012 L 8.47

at the Little River

Beaverdam Creek Estuary Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life** pH - Total Impaired Size by Water Type: 8.47

Sources:

Source Unknown

York River Basin

Cause Group Code: F11R-03-BAC Little River

Cause Location: The Little River from Route 1 downstream to its mouth.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The Little River from Beaverdam Creek to its mouth at the North Anna River was impaired during the 2014 cycle due to E. coli

exceedances.

The violation rates are as follows in the 2018 cycle:

7/65 at 8-LTL009.54 (Rt. 685) 5/11 at 8-LTL002.69 (Rt. 689)

The Little River is within the study area for the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. The impairment is considered nested.

In the 2020 cycle, the exceedance rate was acceptable at 8-LTL009.54 (4/57). No additional data has been collected at 8-LTL002.69. The segment will be shortened to extend from Route 1 to the mouth until data can be collected to characterize 8-LTL002.69 again. Additional monitoring should be prioritized. The upper portion (14.54 miles) will be partially delisted (Category 2A).

				Cycle	LINIDE	
		Caus	e	First	Dev.	Water
Assessment Unit /	Water Name / Location Desc.	Catego	ory Cause Name	Listed	Priority	Size
VAP-F11R LTL01A98	/ Little River / From Route 1 to its mouth	at 4A	Escherichia coli (E. coli)	2014	L	3.74

the North Anna River.

2014 L 3.74

Cycle TMDI

Segment split in 2020 cycle.

Little River		Estuary	Reservoir	River
Recreation		(Sq. Miles)	(Acres)	(Miles)
	Escherichia coli (E. coli) - Total Impaired Size by Water Type:			3.74

Sources:

Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F11R-04-BAC Locust Creek

Cause Location: Begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.

City / County: Hanover Co. Louisa Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Excursions from the maximum E. coli bacteria criterion (3 of 12 samples - 25.0%) at DEQ station 8-LOC001.10 at Route 608.

A new TMDL is not required for this impaired segment of Locust Creek because the downstream Pamunkey River and Tributaries bacteria TMDL (Fed ID 65140, 04/27/2015) included modeling, source identification, and reductions that covered the entire Upper Little River watershed (Eq. ID 1160).

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.

Cause
Category Cause Name

Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size

AN-F11R LOC01A06 / Locust Creek / Segment begins at the A Escherichia coli (E. coli) 2020 L 6.59

VAN-F11R_LOC01A06 / Locust Creek / Segment begins at the headwaters to of Locust Creek and continues downstream until the confluence with Little River.

Locust CreekEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 6.59

Sources:

Grazing in Riparian or Shoreline Zones Eeding Operations)

Wastes from Pets

Livestock (Grazing or Feeding Operations)

Forest/Grassland/Parkland

Wildlife Other than Waterfowl

Waterfowl

York River Basin

Cause Group Code: F12R-02-BAC Mechumps Creek

Cause Location: Mechumps Creek from its confluence with Slayden Creek to the Pamunkey River.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Mechumps Creek was initially assessed as not supporting of the Recreation Use due to fecal coliform exceedances at 8-MCP002.42.

During the 2006 cycle, the Bacteria TMDL for Mechumps Creek was developed and approved by the EPA on 10/21/2004. The segment remained impaired for fecal coliform and E. coli and was classified as Cat. 4A.

During the 2008 cycle, the impairment converted to E. coli. The exceedance rate at 8-MCP002.42 was 4/19 during the 2010 cycle. No additional data has been collected by the DEQ. However, Level 2 Coliscan data from 8-MCP-8-RMC, which is colocated with 8-MCP002.42, was acceptable during the 2014 cycle (0/16); therefore, additional monitoring by the DEQ is recommended.

The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MCP01A94 / Mechumps Creek / Slayden Creek to the 4A Escherichia coli (E. c Pamunkey River	oli)	2006	L	5.78
Mechumps Creek Recreation	Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Typ	e:			5.78

Sources:

Industrial Point Source Municipal Point Source Non-Point Source Discharge Discharges

York River Basin

Cause Group Code: F12R-05-BAC Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2010 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 3/11 at 8-MCP009.56, which is located at Arbor Oak Drive. The bacterial TMDL for a downstream segment of Mechumps Creek was already completed and was approved by the EPA on 10/21/2004 and by the SWCB on 12/20/2005. As this downstream impairment required a 94.04% in nonpoint sources in the watershed, this segment was considered nested (Category 4A.)

Subsequently, the segment was specifically addressed in the Pamunkey River and Tributaries Bacterial TMDL, which superseded the previous TMDL. The TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. No additional data has been collected by the DEQ; however, coliscan monitoring at a citizen station shows evidence of continued impairment.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek from its headwaters downstream to the confluence with XEG.	4A Escherichia coli (E. coli)		2010	L	1.05
Mechumps Creek		Estuary	Res	ervoir	River
Recreation		(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Tota	al Impaired Size by Water Type:				1.05

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F12R-05-DO Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5A

During the 2010 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 4/23 at 8-MCP009.56, which is located at Arbor Oak Drive.

During the 2016 cycle, the exceedance rate was 3/10.

Cause Assessment Unit / Water Name / Location Desc. Category Cause N	F	Cycle TMDL First Dev. isted Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek 5A Dissolved O from its headwaters downstream to the confluence with XEG.	ixygen 2	2010 L	1.05
Mechumps Creek Aquatic Life	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Dissolved Oxygen - Total Impaired Size by Wa	ater Type:		1.05

Sources:

Source Unknown

York River Basin

Cause Group Code: F12R-05-PH Mechumps Creek

Cause Location: Headwaters to the confluence with unnamed tributary to XEG

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

During the 2006 cycle, Mechumps Creek from its headwaters to the confluence with tributary XEG was assessed as impaired of the Aquatic Life Use due to pH exceedances at 8-MCP009.56, which is located at Arbor Oak Drive.

Cuele TMDI

During the 2016 cycle, the exceedance rate was 4/10.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAP-F12R_MCP03A06 / Mechumps Creek / Mechumps Creek from its headwaters downstream to the confluence with XEG.	5A pH		2006	L	1.05
Mechumps Creek Aquatic Life		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
nH - Total	Impaired Size by Water Type:				1.05

Sources:

Source Unknown

York River Basin

Cause Group Code: F12R-07-BAC Crump Creek

Cause Location: The mainstem of Crump Creek.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2008 cycle, Crump Creek was assessed as not supporting of the Recreation Use based on E.coli exceedances at

the Route 605 bridge (8-CRU000.92).

During the 2016 cycle, the violation rates in the segment were as follows:

0/12 at 8-CRU000.92 3/12 at 8-CRU005.61 2/12 at 8-CRU008.30

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cycle TMDL

10.00

Cause			Dev.	Water
Assessment Unit / Water Name / Location Desc.	Category Cause Name	Listed	Priority	Size
VAP-F12R_CRU01A02 / Crump Creek / Crump Creek from its headwaters downstream to its mouth at the Pamunkey River.	4A Escherichia coli (E. coli)			10.00
Crump Creek	Estua	ary Res	servoir	River
Recreation	(Sq. M	iles) (A	cres)	(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F12R-07-PH Crump Creek

Cause Location: The mainstem of Crump Creek.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2010 cycle, Crump Creek was assessed as not supporting of the Aquatic Life Use based on pH violations at the

Route 605 bridge (8-CRU000.92). During the 2016 cycle, the violation rates in the segment were as follows:

5/24 at 8-CRU000.92 5/12 at 8-CRU005.61 10/12 at 8-CRU008.30

Cause Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAP-F12R_CRU01A02 / Crump Creek / Crump Creek from its 5C pH 2010 L 10.00

headwaters downstream to its mouth at the Pamunkey River.

Crump Creek

Aquatic Life

PH - Total Impaired Size by Water Type:

Reservoir (Sq. Miles)

(Acres)

River (Miles)

10.00

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-08-BAC **Pamunkey River**

Cause Location: The Pamunkey River from its start at the confluence of the South Anna and North Anna Rivers downstream to the

confluence with Mechumps Creek.

City / County: Caroline Co. Hanover Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2016 cycle, the Pamunkey River from its headwaters to the confluence with Mechumps Creek was assessed as not supporting of the Recreation Use based on an E. coli violation rate of 12/58 at the Route 614 bridge (8-PMK082.34). Violation rates at 8-PMK088.11 were acceptable.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

In the 2020 cycle, exceedance rates were 18/72 at 8-PMK082.34 and 5/24 at 8-PMK088.11 (2018 cycle).

	Cause		Dev.	Water
Assessment Unit / Water Name / Location Desc.	Category Cause Name		Priority	
VAP-F12R_PMK01B08 / Pamunkey River / The nontidal	4A Escherichia coli (E. coli)	2016	L	12.27

Pamunkey River from the North and South Anna Rivers to Mechumps Creek.

Pamunkey River	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 12.27

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F12R-09-BAC XEG - Mechumps Creek, UT

Cause Location: Headwaters to its mouth at Mechumps Creek

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2010 cycle, tributary XEG was assessed as impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at 8-XEG000.06, which is located at Cottage Green Drive. The bacterial TMDL for a downstream segment of Mechumps Creek was already completed and was approved by the EPA on 10/21/2004 and by the SWCB on 12/20/2005. As this downstream impairment required a 94.04% in nonpoint sources in the watershed, this segment was considered nested (Category 4A.)

The TMDL was superseded in the 2016 cycle by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015; XEG was specifically addressed.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_XEG01A06 / XEG - Mechumps Creek, UT (aka Middle Branch) / Headwaters to mouth at Mechumps Creek	4A Escherichia coli (E. coli)		2010	L	0.48
XEG - Mechumps Creek, UT		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Recreation Escherichia coli (E. coli) - Tota	Il Impaired Size by Water Type:	(Sq. Miles)	(Ac	165)	0.48

Sources:

Industrial Point Source Discharge Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F12R-10-PH Millpond Creek

Cause Location: The mainstem of Millpond Creek downstream of Gravatts Millpond.

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Millpond Creek was assessed as not supporting of the Aquatic Life Use based on pH exceedances at

the Route 614 bridge (8-MLP002.74).

The exceedance rate was 5/23 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_MLP01A00 / Millpond Creek / Mainstem downstream of Gravatts Millpond.	5C pH		2012	L	3.02
Millpond Creek Aquatic Life		Estuary (Sq. Miles)		ervoir :res)	River (Miles)

pH - Total Impaired Size by Water Type:

3.02

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-11-BAC **Kersey Creek**

Cause Location: Kersey Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, Kersey Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 3/12 at

the Route 301 bridge (8-KER001.31).

Kersey Creek was included in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on

12/11/2014 and by the EPA on 4/27/2015.

Cycle **TMDL** First Dev. Water Cause Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F12R_KER01A12 / Kersey Creek / Headwaters to mouth at 4A Escherichia coli (E. coli) 2012 3.32 Crump Creek Kersey Creek **Estuary** Reservoir River

(Sq. Miles) (Acres) (Miles) Recreation 3.32

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F12R-11-PH Kersey Creek

Cause Location: Kersey Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Kersey Creek was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 4/12 at the

Route 301 bridge (8-KER001.31).

Crump Creek

Kersey Creek

Aquatic Life

pH - Total Impaired Size by Water Type:

Estuary (Sq. Miles)
Reservoir (Miles)
(Acres)
River (Miles)

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-12-BAC XJC - Crump Creek, UT

Cause Location: XJC mainstem in its entirety.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, XJC was assessed as impaired of the Recreation Use due to an E. coli violation rate of 5/12 at the

Route 301 bridge (8-XJC001.12).

The tributary was included in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on

12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Ī	First Dev. isted Priority	Water Size
VAP-F12R_XJC01A12 / XJC - Crump Creek, UT / Headwaters to mouth at Crump Creek	o 4A Escherichia coli (E. coli)	2	2012 L	1.96
XJC - Crump Creek, UT Recreation		Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total	Impaired Size by Water Type:			1.96

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F12R-12-PH **XJC - Crump Creek, UT**

Cause Location: XJC mainstem in its entirety.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, XJC was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 5/12 at the Route

301 bridge (8-XJC001.12).

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F12R XJC01A12 / XJC - Crump Creek, UT / Headwaters to 5C pH 2012 L 1.96

mouth at Crump Creek

XJC - Crump Creek, UT Estuary Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

pH - Total Impaired Size by Water Type: 1.96

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-13-BAC Pollard Creek

Cause Location: Pollard Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, Pollard Creek was assessed as impaired of the Recreation Use due to an E. coli violation rate of 2/12 at

the Route 647 bridge (8-PLD001.73).

Pollard Creek was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on

12/11/2014 and by the EPA on 4/27/2015.

The exceedance rate was 5/12 in the 2020 cycle.

	Escherichia coli (E. coli) - Total	Impaired	Size by Water Type:				4.20
Recreation				(Sq. Miles)	(Ac	res)	(Miles)
Pollard Creek				Estuary		ervoir	River
VAP-F12R_PLD01A12 / Po at Crump Creek	ollard Creek / Headwaters to its mouth	n 4A	Escherichia coli (E. coli)		2012	L	4.20
Assessment Unit / Wat	er Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Appendix 5 - 3208

Sources:

Municipal Point Source Discharges Non-Point Source

Draft 2020

York River Basin

Cause Group Code: F12R-13-DO **Pollard Creek**

Cause Location: Pollard Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

During the 2020 cycle, Pollard Creek was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 3/12

at 8-PLD001.73, which is located at the Route 647 bridge.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F12R_PLD01A12 / Pollard Creek / Headwaters to its mouth 5C Dissolved Oxygen at Crump Creek		2020	L	4.20
Pollard Creek	Estuary	Rese	ervoir	River

(Sq. Miles) (Acres) (Miles) **Aquatic Life**

Dissolved Oxygen - Total Impaired Size by Water Type: 4.20

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-13-PH Pollard Creek

Cause Location: Pollard Creek mainstem in its entirety.

City / County: Hanover Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Pollard Creek was assessed as impaired of the Aquatic Life Use due to a pH violation rate of 8/12 at the

Route 647 bridge (8-PLD001.73).

The exceedance rate was 4/12 in the 2020 cycle.

	pH - Total	Impaired Size by Water Type	:			4.20
Aquatic Life			(Sq. Miles)	(Ac	res)	(Miles)
Pollard Creek			Estuary	Res	ervoir	River
VAP-F12R_PLD01A12 / Pollard Cre at Crump Creek	ek / Headwaters to its mouth	₁ 5C pH		2012	L	4.20
Assessment Unit / Water Name	/ Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F12R-14-BAC Pamunkey River

Cause Location: The Pamunkey River from the confluence with Mechumps Creek downstream to Nelson Bridge Road

City / County: Hanover Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2020 cycle, the Pamunkey River from Mechumps Creek downstream to Nelson Bridge Road (Rt. 615) was impaired of the Recreation Use due to an E. coli exceedance rate of 3/24 at 8-PMK072.34.

This segment is located within the Middle Pamunkey River TMDL Watershed Unit which was addressed in the Pamunkey River and Tributaries Bacterial TMDL. The TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. Although the impairment was not listed at the time, it is proposed for nesting (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	First Listed	Dev. Priority	Water Size
VAP-F12R_PMK01A00 / Pamunkey River / The nontidal	4A Escherichia coli (E. coli)	2020	L	9.17
Pamunkey River from Mechumps Creek to Nelson Bridge Road				

Pamunkey River from Mechumps Creek to Nelson Bridge Road (Route 615,)

Pamunkey River
Recreation

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 9.17

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F13E-01-BAC Pamunkey River

Cause Location: From the tidal limit at Totopotomoy Creek to Pampatike Landing

City / County: Hanover Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2008 cycle, the Pamunkey River from the tidal limit to Pampatike Landing was impaired of the Recreation Use due to E. coli exceedances at 8-PMK056.87 (Rt. 360 bridge). The exceedance rate was 8/35 during the 2020 cycle.

The Pamunkey River and Tributaries Bacterial TMDL was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near

4A Escherichia coli (E. coli)

2008 L 0.307

Totopotomoy Creek to Pampatike Landing.

PMKTF

Pamunkey River

Estuary Reservoir River

Recreation (Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 0.307

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F13E-02-BAC Pamunkey River

Cause Location: From Route 654 (Pampatike Landing to Macon Creek (the downstream boundary of watershed F13).

City / County: Hanover Co. King William Co. New Kent Co.

Use(s): Recreation

Discharge

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The Pamunkey River from Pampatike Landing to Macon Creek was initially listed on the 1998 303(d) list as impaired of the Recreation Use goal because of fecal coliform exceedances at Pampatike Landing (Route 654). EPA also identified the station on their list of "Waters Identified to Virginia for Consideration During Development of the Next Listing Cycle." This inclusion was probably in error as the segment was already 303(d) listed.

During the 2006 cycle, the bacteria standard changed to E. coli and the segment had acceptable exceedance rates and the segment was delisted. However, it was included in the Pamunkey Basin TMDL which was approved by the EPA on 8/2/2006.

During the 2008 cycle, the Pamunkey River again failed the Recreation Use based on E. coli exceedances at 8-PMK048.80. The original impairment is considered a Category 4A water.

The Pamunkey remains impaired in the 2020 cycle (6/29 at 8-PMK048.80 and 2/12 at 8-PMK039.74 (2016 cycle)). Monitoring at 8-PMK044.64 was acceptable.

The segment is considered a Category 4A water. The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK02A98 / Pam downstream to Jacks Creek.	unkey River / Pampatike Landing	4A	Escherichia coli (E. col	i)	2008	L	0.783
PMKTF							
VAP-F13E_PMK03A06 / Pam downstream to Macon Creek.	unkey River / Jacks Creek	4A	Escherichia coli (E. col	i)	2008	L	0.115
PMKTF							
Pamunkey River				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
	Escherichia coli (E. coli) - Total	Impaire	d Size by Water Type:	0.898			
Sources:							
Industrial Point Source	Municipal Point Source	Non-P	oint Source				

Draft 2020 Appendix 5 - 3213

Discharges

York River Basin

Cause Group Code: F13R-01-BAC Matadequin Creek

Cause Location: Matadequin from the confluence with Parsleys Creek to the mouth.

City / County: Hanover Co. New Kent Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Matadequin Creek from Parsleys Creek to its mouth was assessed in 1998 as fully supporting but threatened of the Recreation Use goal. However, it was mistakenly included on the 1998 Consent Decree as an Attachment A Part 1 Water ("Waters listed on Part 1 of Virginia's October 14, 1998 303(d) Report"); therefore, the TMDL was due by 2010.

In 2002, the segment was downgraded to impaired. The impairment converted to E. coli during the 2008 cycle.

The bacterial TMDL for Matadequin Creek was approved by the EPA on 10/21/2004 and the segment is a Cat. 4A water. The TMDL was subsequently superseded by the Pamunkey River and Tributaries TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

The segment continues to be impaired of the Recreation Use goal based on an E. coli violation rate of 4/12 at 8-MDQ001.37 in the 2012 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_MDQ01A98 / Matadequin Creek / Downstream of Parsleys Creek.	4A Escherichia coli (E. coli)		2006	L	4.91
Matadequin Creek Recreation		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Escherichia coli (E. coli) - Tota	al Impaired Size by Water Type:				4.91

Sources:

Non-Point Source

York River Basin

Cause Group Code: F13R-02-BAC Totopotomoy Creek

Cause Location: Strawhorn Creek to the Pamunkey River.

City / County: Hanover Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Totopotomoy Creek was initially listed in 2002 as not supporting of the Recreation Use goal based on fecal coliform exceedances at the Route 606 bridge (8-TPT004.37). During the 2006 cycle, the impairment switched to E. coli.

The bacteria TMDL was completed during the 2008 cycle as part of the Pamunkey River Basin TMDL, which was approved by the EPA on 8/2/2006 and by the SWCB on 6/27/2007. The segment is now considered a Category 4A water.

The exceedance rates were 3/9 at 8-TPT004.37 and 2/10 at 8-TPT000.79 during the 2018 cycle.

Escherichia coli (E. coli) - Total Impaired Size by Water Type:						
Totopotomoy Creek Recreation		Estuary (Sq. Miles)	Reservoir (Acres)		River (Miles)	
VAP-F13R_TPT01A98 / Totopotomoy Creek / Strawhorn Cr the Pamunkey River.	eek to 4A Escherichia coli (E. coli)		2006	L	10.26	
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Cycle First Listed	First	TMDL Dev. Priority	Water Size	

Sources:

Non-Point Source On-site Treatment Systems

(Septic Systems and Similar Decentralized Systems)

York River Basin

Cause Group Code: F13R-03-BAC Jacks Creek and major tributaries

Cause Location: Jacks Creek, Acquinton Creek, and Mallory Creek in their entireties.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2008 cycle, the streams were assessed as not supporting of the Recreation Use based on E. coli violations at the Route 621 bridge (8-JKC004.15).

Additional E. coli data was collected in the 2014 cycle. The Jacks Creek impairment was confirmed with violation rates of 3/12, 2/11, and 4/12 at stations 8-JKC004.15, 8-JKC005.80, and 8-MLY001.58, respectively (8- JKC007.95 was acceptable (0/12).) E. coli levels on Acquinton Creek was determined to meet the WQS and therefore Acquinton Creek was partially delisted. However, the assessment was in error and Acquinton Creek remains listed.

Cuele TMDI

The entire impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the SWCB on 4/27/2015. The creeks are considered Category 4A.

Monitoring was continued at 8-JKC004.15 in the 2016 cycle (3/12.)

			(04. 111100)	() (0		(
Jacks Creek and major tributaries Recreation			Estuary (Sq. Miles)		ervoir eres)	River (Miles)
VAP-F13R_MLY01A12 / Mallory Creek / Mallory Creek in its entirety.	4A	Escherichia coli (E. coli)		2008	L	4.02
VAP-F13R_JKC01A98 / Jacks Creek / Jacks Creek in its entirety	4A	Escherichia coli (E. coli)		2008	L	7.51
VAP-F13R_ACQ01A14 / Acquinton Creek / Headwaters to mouth at Jacks Creek	4A	Escherichia coli (E. coli)		2008	L	9.65
Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name		First Listed	Dev. Priority	Water Size

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F13R-04-BAC Moncuin Creek, Webb Creek

Cause Location: From the headwaters of Webb Creek downstream to the swampy area around river mile 2.0.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

In 1998, Moncuin Creek was assessed as fully supporting but threatened of the Recreation use because of fecal coliform exceedances at the Route 618 bridge.

In the 2002 cycle, the segment was extended to incorporate the station on Webb Creek and was assessed not supporting of the Recreation Use because of fecal coliform exceedances. The TMDL was due in 2014. The impairment converted to E. coli during the 2006 cycle.

During the 2008 cycle, the bacteria TMDL was addressed as part of the Pamunkey River Basin Bacteria TMDL, which was approved by the EPA on 8/2/2006. This is considered a Category 4A water.

The exceedance rate was 5/23 at 8-MNQ004.19 during the 2010 cycle.

The TMDL was superseded by the Pamunkey River and Tributaries Bacterial TMDL which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

During the 2018 cycle, the E. coli exceedance rate was 4/11 at 8-WEB002.00.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_MNQ01A98 / Monquin Creek / Webb Creek / Fro headwaters of Webb Creek downstream to the swampy area or		2006	L	12.12
Monquin Creek around river mile 2.				

Moncuin Creek, Webb Creek	Estuary	Reservoir	River
Recreation	(Sq. Miles)	(Acres)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size	by Water Type:		12.12

Sources:

Municipal Point Source Non-Point Source Discharges

York River Basin

Cause Group Code: F13R-04-PCB Moncuin Creek, Webb Creek

Cause Location: From the headwaters of Webb Creek downstream to the swampy area around river mile 2.0.

City / County: King William Co. Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A

During the 2010 cycle, Moncuin and Webb Creeks were assessed as impaired of the Fish Consumption Use due to exceedances of the PCB tissue value at 8-MNQ004.19. PCBs exceeded in yellow bullhead catfish in 2003 and American eel in

2008.

TMDL Cycle First Dev. Cause Water Category Cause Name Assessment Unit / Water Name / Location Desc. Listed **Priority** Size VAP-F13R_MNQ01A98 / Monquin Creek / Webb Creek / From the 5A PCBs in Fish Tissue 2010 12.12 headwaters of Webb Creek downstream to the swampy area on Monquin Creek around river mile 2.

Moncuin Creek, Webb Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Fish Consumption**

PCBs in Fish Tissue - Total Impaired Size by Water Type: 12.12

Sources:

Source Unknown

York River Basin

Cause Group Code: F13R-07-PH Jacks Creek

Cause Location: Headwaters to limit of tide

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

During the 2018 cycle, the Jacks Creek watershed was reclassified as Class VII swampwaters. It was assessed against the

Class VII pH criteria of 3.7-8.0 SU. Jacks Creek was impaired due to elevated pH levels (2/12) at 8-JKC007.95.

The remaining stations 8-JKC004.15 and 8-JKC005.80 had acceptable exceedance rates (0/24 and 0/13, respectively).

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_JKC01A98 / Jacks Creek / Jacks Creek in its	entirety 5A pH		2018	L	7.51
Jacks Creek Aquatic Life		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
pH	- Total Impaired Size by Water Type	:			7.51

Sources:

Dam or Impoundment Source Unknown

York River Basin

Cause Group Code: F13R-08-BAC Black Creek

Cause Location: Black Creek from Southern Branch downstream to tidal limit

City / County: New Kent Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2018 cycle, Black Creek was impaired of the Recreation Use due to an E. coli exceedance rate of 3/12 at 8-

BLC001.77 (Route 608).

The bacteria TMDL was previously completed for this segment as part of the Pamunkey River Basin Bacteria TMDL, which was approved by the EPA on 8/2/2006. The TMDL was subsequently superseded by the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015. The segment is considered a Category 4A water.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_BLC01A00 / Black Creek / Southern Branch 4A Escherichia coli (E. co downstream to tidal limit	li)	2018	L	1.95
Black Creek	Estuary	Res	ervoir	River
Recreation	(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type	:			1.95

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F13R-09-BAC XDX - UT to XDW (Pamunkey River, UT)

Cause Location: The mainstem of unnamed tributary XDX.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The tributary was initially considered as not supporting of the Recreation Use goal during the 2004 cycle based on fecal coliform violations at the Route 604 bridge (8-XDX000.38). The impairment converted to E.coli during the 2012 cycle due to an exceedance rate of 3/12.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDX01A04 / XDX - UT to XDW (Pamunkey River, UT) 4A Escherichia coli (E. coli) / Headwaters to mouth at XDW		2012	L	3.85
XDX - UT to XDW (Pamunkey River, UT) Recreation	Estuary (Sq. Miles)		ervoir eres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				3.85

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F13R-09-PH XDX - UT to XDW (Pamunkey River, UT)

Cause Location: The mainstem of unnamed tributary XDX.

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The tributary was considered as not supporting of the Aquatic Life Use goal during the 2012 cycle based on a pH violation rate of 2/11 at the Route 604 bridge (8-XDX000.38).

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F13R XDX01A04 / XDX - UT to XDW (Pamunkey River, UT) 5C pH 2012 L 3.85 / Headwaters to mouth at XDW

XDX - UT to XDW (Pamunkey River, UT)

Aquatic Life

PH - Total Impaired Size by Water Type:

Reservoir (Acres)

River (Miles)

River (Miles)

3.85

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F13R-11-BAC XDW - UT to Pamunkey River

Cause Location: The mainstem of unnamed tributary XDW.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The tributary was assessed as not supporting of the Recreation Use goal during the 2012 cycle based on E. coli exceedances at the Route 604 bridge (8-XDW000.67). During the 2016 cycle, the violation rate was 2/12.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Cycle TMDI

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAP-F13R_XDW01A08 / XDW - Pamunkey River, UT / Headwaters to mouth at the Pamunkey River	4A Escherichia coli (E. coli)		2012	L	5.51
XDW - UT to Pamunkey River Recreation		Estuary (Sq. Miles)		ervoir res)	River (Miles)
Escherichia coli (E. coli) - To	otal Impaired Size by Water Type:				5.51

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F13R-11-PH XDW - UT to Pamunkey River

Cause Location: The mainstem of unnamed tributary XDW.

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

The tributary was assessed as not supporting of the Aquatic Life Use goal during the 2012 cycle based on pH exceedances at the Poute 604 bridge (8 XDW)000 67)

the Route 604 bridge (8-XDW000.67).

The exceedance rate was 4/23 during the 2016 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XDW01A08 / XDW - Pamunkey River, UT / Headwaters to mouth at the Pamunkey River	5C pH	2012	L	5.51
VBW UT O				

XDW - UT to Pamunkey River

Aquatic Life

PH - Total Impaired Size by Water Type:

Reservoir (Sq. Miles)

Reservoir (Acres)

River (Acres)

Fixed Pamunkey River (Miles)

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F13R-12-PH Judy Swamp

Cause Location: Judy Swamp from its headwaters to its mouth at the Pamunkey River.

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Judy Swamp was impaired of the Aquatic Life Use due to pH exceedances at 8-JDY000.19 and at 8-

JDY001.27, the Rt. 604 and Rt. 639 bridges.

The 2016 cycle's exceedance rates were 4/10 and 9/23, respectively.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_JDY01A02 / Judy Swamp / The mainstem of Judy Swamp.	5C pH		2012	L	3.33
Judy Swamp Aquatic Life		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
pH - Total I	mpaired Size by Water Type:				3.33

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F13R-13-HG Pamunkey River

Cause Location: The Pamunkey River from Nelson Bridge Road (Route 15) downstream approximately 72 miles to the mouth at the

York River.

City / County: Hanover Co. King William Co. New Kent Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

On 9/30/2004, VDH issued a fish consumption advisory from Nelson Bridge Road to Jacks Creek near Liberty Hall. The advisory recommends no more than two meals per month of blue catfish because of mercury contamination in the fish tissue.

This condemnation was expanded on 10/7/2009 and now extends downstream to the mouth at the York River.

The advisory is based on mercury fish tissue exceedances at DEQ monitoring stations 8-PMK056.87, 8-PMK032.00, and 8-PMK006.36.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing.	5A	Mercury in Fish Tissue	2006	M	0.307
PMKTF					
VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek.	5A	Mercury in Fish Tissue	2006	M	0.783
PMKTF					
VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek.	5A	Mercury in Fish Tissue	2010	M	0.115
PMKTF					
VAP-F13R_PMK01A98 / Pamunkey River / From Nelson Bridge Road (Rt. 615) in F12 to limit of tide near Totopotomoy Creek	5A	Mercury in Fish Tissue	2006	М	11.56
VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately river mile 23.6	5A r	Mercury in Fish Tissue	2010	M	3.638
PMKTF					
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing.	1 5A	Mercury in Fish Tissue	2010	M	0.113
РМКОН					
VAP-F14E_PMK05B00 / Pamunkey River / Tidal freshwater/oligohaline boundary at approximately river mile 23.6 downstream to 0.5 mile above station 8-PMK017.90	5A	Mercury in Fish Tissue	2010	M	1.193
РМКОН					
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 8/15/2018	5A	Mercury in Fish Tissue	2010	M	3.382
РМКОН					
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 8/15/2018 to mesohaline boundary	5A	Mercury in Fish Tissue	2010	M	0.584

York River Basin

PMKOH

VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary 5A Mercury in Fish Tissue 2010 M 0.398

o mouth

YRKMH

Pamunkey River Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

Mercury in Fish Tissue - Total Impaired Size by Water Type: 10.513 11.56

Sources:

Atmospheric Deposition - Source Unknown

Toxics

York River Basin

Cause Group Code: F13R-13-PCB Pamunkey River

Cause Location: The Pamunkey River from Nelson Bridge Road (Route 15) downstream approximately 72 miles to the mouth at the

York River.

City / County: Hanover Co. King William Co. New Kent Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A

On 10/7/2009, VDH issued a fish consumption advisory from Nelson Bridge Road to the mouth at West Point. The advisory recommends no more than two meals per month of gizzard shad because of PCB contamination in the fish tissue.

Cycle TMDI

The advisory is based on PCB fish tissue exceedances at DEQ monitoring stations 8-PMK056.87, 8-PMK032.00, and 8-PMK006.36.

	Assessment Unit / Water Name / Location Desc.	Cause	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size	
	AP-F13E_PMK01A98 / Pamunkey River / Extent of tide near otopotomoy Creek to Pampatike Landing.	5A	PCBs in Fish Tissue	2010	M	0.307	
	MKTF						
	AP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing ownstream to Jacks Creek.	5A	PCBs in Fish Tissue	2010	М	0.783	
PI	MKTF						
	AP-F13E_PMK03A06 / Pamunkey River / Jacks Creek ownstream to Macon Creek.	5A	PCBs in Fish Tissue	2010	М	0.115	
PI	MKTF						
	AP-F13R_PMK01A98 / Pamunkey River / From Nelson Bridge oad (Rt. 615) in F12 to limit of tide near Totopotomoy Creek	5A	PCBs in Fish Tissue	2010	М	11.56	
do	AP-F14E_PMK02A00 / Pamunkey River / Macon Creek to ownstream extent of tidal freshwater segment at approximately river ile 23.6	5A er	PCBs in Fish Tissue	2010	M	3.638	
PI	MKTF						
	AP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station. PMK017.90 downstream to Sweet Hall Landing.	on 5A	PCBs in Fish Tissue	2010	М	0.113	
PI	МКОН						
fre	AP-F14E_PMK05B00 / Pamunkey River / Tidal eshwater/oligohaline boundary at approximately river mile 23.6 ownstream to 0.5 mile above station 8-PMK017.90	5A	PCBs in Fish Tissue	2010	М	1.193	
PI	МКОН						
	AP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to ostream boundary of VDH-DSS SFC 049-004A, 8/15/2018	5A	PCBs in Fish Tissue	2010	М	3.382	
PI	МКОН						
	AP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-04A, 8/15/2018 to mesohaline boundary	5A	PCBs in Fish Tissue	2010	М	0.584	

Draft 2020 Appendix 5 - 3228

PMKOH

York River Basin

VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary 5A PCBs in Fish Tissue 2010 0.398 Μ to mouth

YRKMH

Pamunkey River Estuary Reservoir River (Sq. Miles) (Acres) (Miles) **Fish Consumption** PCBs in Fish Tissue - Total Impaired Size by Water Type: 11.56

10.513

Sources:

Source Unknown

York River Basin

Cause Group Code: F13R-14-PH XIV - Mehixen Creek, UT

Cause Location: Headwaters to mouth at the Pamunkey River

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, Mehixen Creek and its tributary XIV were impaired of the Aquatic Life Use due to pH violation rates of 4/11 at stations 8-MHX001.50 and 8-XIV000.88, which are both located at Rt. 652.

A Natural Conditions Assessment was completed during the 2014 cycle. The exceedances were attributed to natural swampwater conditions and the report recommends that the watershed be reclassified as Class VII swampwater. However, the slopes and nutrients were slightly above the current protocol, so the watershed remained Category 5C.

Additional monitoring was conducted in the 2018 cycle at 8-MHX001.50. The exceedance rate was acceptable (1/11); therefore, the Mehixen Creek mainstem was partially delisted. XIV will remain impaired until monitoring at 8-XIV000.88 can be conducted.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XIV01A18 / XIV - Mehixen Creek, UT / Headwaters to mouth at Mehixen Creek	o 5C pH		2012	L	2.04
XIV - Mehixen Creek, UT Aguatic Life		Estuary Sq. Miles)	Rese (Ac	ervoir res)	River (Miles)
•	mpaired Size by Water Type:				2.04

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F13R-15-BAC XIW - Jacks Creek, UT

Cause Location: The tributary XIW from its headwaters to its mouth at Jacks Creek.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The tributary was monitored during the 2014 cycle to help characterize the downstream bacterial impairment on Jacks Creek. The station was located at the Route 663 bridge (8-XIW000.42).

The E. coli exceedance rate was 3/11; therefore, the stream is considered impaired.

The E. coli data results were included in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the SWCB on 4/27/2015.

Note: although the data from XIW was included in the TMDL, the impairment itself was not specifically mentioned and was moved to nested in the 2018 cycle.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13R_XIW01A12 / XIW - Jacks Creek, UT / Headwaters to 4A Escherichia coli (E. coli mouth at Jacks Creek)	2014	L	2.28
XIW - Jacks Creek, UT Recreation	Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				2.28

Sources:

Municipal Point Source Discharges

Non-Point Source

York River Basin

Cause Group Code: F14E-03-BAC Pamunkey River

Cause Location: The Pamunkey River from Sweet Hall Landing to the mouth.

City / County: King William Co. New Kent Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The Pamunkey River from Sweet Hall Landing to the mouth was assessed as not supporting of the Recreation Use during the 2006 cycle based on enterococci exceedances at 8-PMK006.36, located at the southern end of Lee Marsh.

Cycle TMDI

The TMDL was approved by the EPA on 7/28/2010 and by the SWCB on 12/13/2010.

The exceedance rate in the 2020 cycle was 9/47. Sampling at 8-PMK016.23 was acceptable (1/12).

Assessment Unit / Water Name / Lo	Caus cation Desc. Catego	e ry Cause Name	F	irst sted	Dev. Priority	Water Size
VAP-F14E_PMK06A00 / Pamunkey River upstream boundary of VDH-DSS SFC 049-0	3	Enterococcus	20	006	L	3.382
PMKOH VAP-F14E_PMK06B06 / Pamunkey River 004A, 8/15/2018 to mesohaline boundary	/ VDH-DSS SFC 049- 4A	Enterococcus	20	006	L	0.584
PMKOH VAP-F14E_PMK07A04 / Pamunkey River to mouth	/ Mesohaline boundary 4A	Enterococcus	20	006	L	0.398
YRKMH						
Pamunkey River Recreation			Estuary (Sq. Miles)	Rese (Acr		River (Miles)
	Enterococcus - Total Impaire	d Size by Water Type:	4.364			

Sources:

Industrial Point Source Municipal Point Source Non-Point Source Discharge Discharges

York River Basin

Cause Group Code: F14E-04-EBEN York-, Pamunkey-, and Mattaponi Rivers

Cause Location: The York mesohaline mainstem, including the applicable mainstem portions of the Pamunkey and Mattaponi Rivers.

City / County: James City Co. King And Queen Co. King William Co. New Kent Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

During the 2018 cycle, the mainstem York mesohaline segment, which includes the mouths of the Pamunkey- and Mattaponi Rivers, was impaired of the Aquatic Life Use due to failure of the Chesapeake Bay B-IBI.

The impairment continued in the 2020 cycle.

	Caus		Cycle First	TMDL Dev.	Water
Assessment Unit / Water Name / Location Desc. C	atego	ory Cause Name	Listed	Priority	Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth	5A	Estuarine Bioassessments	2018	L	0.398
YRKMH					
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004F, 8/15/2018.	5A	Estuarine Bioassessments	2018	L	0.209
YRKMH					
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 8/15/2018 within Mattaponi River mainstem.	5A	Estuarine Bioassessments	2006	L	0.641
YRKMH					
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20180815). CBP segment YRKMH.		Estuarine Bioassessments	2018	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 8/15/2018), approx. Goff Point . CBP segment YRKMH.	5A -	Estuarine Bioassessments	2018	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 8/15/2018. CB Seg - YRKMH.	5A -	Estuarine Bioassessments	2018	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20180815	5A	Estuarine Bioassessments	2018	L	0.042
YRKMH					
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 8/3/2015 . CBP segment YRKMH.	5A	Estuarine Bioassessments	2018	L	0.457
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	5A	Estuarine Bioassessments	2018	L	2.680
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and	5A	Estuarine Bioassessments	2018	L	20.372

York River Basin

extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.

VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004, 20180815. CB segment

Estuarine Bioassessments

2018

L 0.023

YRKMH.

York-, Pamunkey-, and Mattaponi Rivers

Estuary (Sq. Miles) Reservoir (Acres)

River (Miles)

Estuarine Bioassessments - Total Impaired Size by Water Type: 29.899

Sources:

Aquatic Life

Source Unknown

York River Basin

Cause Group Code: F14E-05-EBEN Pamunkey River

Cause Location: The mainstem Pamunkey River from 0.5 mile upstream of station 8-PMK017.90 downstream to Sweet Hall Landing.

City / County: King William Co. New Kent Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

The oligohaline Pamunkey River mainstem initially failed the Chesapeake Bay Index of Biologic Integrity during the 2010 cycle. The impairment continued during the 2014 cycle.

In addition, a 2012 weight-of-evidence analysis at estuarine probabilistic monitoring station 8-PMK017.90 showed benthic alteration probably caused by metals in sediment (Category 5A).

The mainstem met the B-IBI criteria in the 2018 cycle. However, due to the 2012 WOE sample the portion of the mainstem around the station will remain listed. Continued monitoring is recommended. The remaining Pamunkey mainstem was partially delisted.

		Cycle	LIVIDE	
	Cause	First	Dev.	Water
Assessment Unit / Water Name / Location Desc.	Category Cause Name	Listed	Priority	Size
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above s	station 5A Estuarine Bioassessments	2010	L	0.113
8-PMK017 90 downstream to Sweet Hall Landing				

8-PMK017.90 downstream to Sweet Hall Landing.

PMKOH

Pamunkey River	Estuary	Reservoir	River
Aquatic Life	(Sq. Miles)	(Acres)	(Miles)

Estuarine Bioassessments - Total Impaired Size by Water Type: 0.113

Sources:

Contaminated Sediments Source Unknown

York River Basin

Cause Group Code: F14E-06-BAC Harrison Creek

Cause Location: The tidal portion of Harrison Creek.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, tidal Harrison Creek was impaired of the Recreation Use due to E.coli exceedances at 8-HSN000.92, which is located at Elsing Green Road. The violation rate was 3/12 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL which was approved by the EPA on 12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water Na	ame / Location Desc.	Cause Category Cause Name	First	Dev. Priority	Water Size
VAP-F14E_HSN01A12 / Harriso	on Creek / Tidal portion of Harri	son 4A Escherichia coli (E. coli)	2012	L	0.044

Creek

PMKTF

Harrison Creek

Recreation

Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 0.044

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F14E-07-EBEN Pamunkey River

Cause Location: The mainstem Pamunkey River from the boundary of VDH-DSS condemnation 049-004A downstream to the

mesohaline boundary.

City / County: King William Co. New Kent Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

During the 2020 cycle, monitoring at 8-PMK002.60, a 2017 weight-of-evidence station, indicated impairment due to the

probable effects of multiple PAHs and metals in sediment.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAP-F14E PMK06B06 / Pamunkey River / VDH-DSS SFC 049- 5A Estuarine Bioassessments 2020 L 0.584

004A, 8/15/2018 to mesohaline boundary

PMKOH

Pamunkey River

Estuary Reservoir River

Aquatic Life (Sq. Miles) (Acres) (Miles)

Estuarine Bioassessments - Total Impaired Size by Water Type: 0.584

Sources:

Contaminated Sediments Source Unknown

York River Basin

Cause Group Code: F14R-01-DO Cohoke Mill Creek

Cause Location: Cohoke Mill Stream mainstem from its headwaters downstream to Cohoke Millpond

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

During the 2010 cycle, Cohoke Mill Stream was assessed as not supporting of the Aquatic Life Use based on dissolved oxygen

violations at 8-CMC005.16, which is located at the Route 626 bridge.

The exceedance rate was 9/25 during the 2014 cycle.

Cycle **TMDL** Dev. Cause First Water Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size 5C Dissolved Oxygen 2010 7.38 VAP-F14R_CMC01A00 / Cohoke Mill Creek / Mainstem upstream

of Cohoke Millpond.

Headwaters adjusted.

Cohoke Mill Creek Reservoir **Estuary** River (Sq. Miles) (Acres) (Miles) **Aquatic Life** Dissolved Oxygen - Total Impaired Size by Water Type: 7.38

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F14R-02-BAC Harrison Creek

Cause Location: Harrison Creek and tributary upstream of pond at Elsing Green upstream to nearest tributaries.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Harrison Creek was assessed as not supporting of the Recreation Use in 2008 based on an E. coli violations at the Route 632 bridge (8-HSN002.12). During the 2014 cycle, the exceedance rates were as follows:

2/12 at 8-HSN002.12 3/12 at 8-HSN002.43 4/15 at 8-HSN003.93

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Harrison Creek				ervoir	River
VAP-F14R_HSN01A00 / Harrison Creek and Tributary / Up of pond at Elsing Green to nearest tributaries.	ostream 4A Escherichia coli (E. coli)		2008	L	2.80
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First _isted	TMDL Dev. Priority	Water Size

Recreation (Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.80

Listinentina con (L. con) - Total impaned size by water Type

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F14R-02-DO **Harrison Creek**

Cause Location: Harrison Creek and tributary upstream of pond at Elsing Green upstream to nearest tributaries.

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

During the 2014 cycle, Harrison Creek was assessed as not supporting of the Aquatic Life Use based on a dissolved oxygen exceedance rate of 2/11 at the Route 632 bridge (8-HSN002.12).

Monitoring at stations 8-HSN002.43 and 8-HSN003.93 was acceptable (1/11).

Cycle **TMDL** Cause First Dev. Water Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size VAP-F14R_HSN01A00 / Harrison Creek and Tributary / Upstream 5C Dissolved Oxygen 2014 2.80 of pond at Elsing Green to nearest tributaries.

Harrison Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life** Dissolved Oxygen - Total Impaired Size by Water Type:

2.80

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F14R-04-BAC XJD - Harrison Creek, UT

Cause Location: Harrison Creek, UT from its headwaters to its mouth at Harrison Creek

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

The UT was impaired of the Recreation Use during the 2012 cycle based on E. coli exceedances at 8-XJD000.02. The exceedance rate was 4/12 during the 2014 cycle.

The impairment was addressed in the Pamunkey River and Tributaries Bacterial TMDL, which was approved by the SWCB on 12/11/2014 and by the EPA on 4/27/2015.

Assessment Unit / Water Name / Location Desc	Cause c. Category Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14R_XJD01A12 / XJD - Harrison Creek, UT / I mouth at Harrison Creek	Headwaters to 4A Escherichia coli (E. coli)	2012	L	0.16
XJD - Harrison Creek, UT Recreation	Estuary (Sq. Mile		servoir cres)	River (Miles)
	coli) - Total Impaired Size by Water Type:			0.16

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F14R-04-PH XJD - Harrison Creek, UT

Cause Location: Harrison Creek, UT from its headwaters to its mouth at Harrison Creek

City / County: King William Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

During the 2012 cycle, XJD was impaired of the Aquatic Life Use due to pH exceedance at 8-XJD000.02. The violation rate was

5/11 during the 2014 cycle.

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name VAP-F14R XJD01A12 / XJD - Harrison Creek, UT / Headwaters to 5C pH 2012 L 0.16

mouth at Harrison Creek

XJD - Harrison Creek, UT Estuary Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

pH - Total Impaired Size by Water Type: 0.16

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F15R-01-BAC Ni River

Cause Location: Begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from

the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

City / County: Caroline Co. Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria excursions (5 of 32 samples 15.6%) at DEQ station 8-NIR003.96 at Route 1.

A new TMDL is not required for this impaired segment of Ni River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66031, 07/19/2016) included modeling, source identification, and reductions that covered the entre Poni

River watershed (Eq. ID 1577).

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name

Cause First Dev. Water
Category Cause Name
Listed Priority Size
AN-F15R NIR01A00 / Ni River / Segment begins at the

4A Escherichia coli (E. coli)
2020 L 5.68

VAN-F15R_NIR01A00 / Ni River / Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

Ni River		Estuary	Reservoir	River
Recreation		(Sq. Miles)	(Acres)	(Miles)
	E			

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 5.68

Sources:

Discharges from Municipal Grazing in Riparian or Livestock (Grazing or Separate Storm Sewer Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Systems (MS4)

Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than Unsewered Areas Waterfowl

York River Basin

Cause Group Code: F15R-01-BEN Ni River

Cause Location: Begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

City / County: Caroline Co. Spotsylvania Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2014 Assessment: Three biological monitoring events in 2007 and 2008 at DEQ station 8-NIR003.96 at Route 1 resulted in a

VSCI assessment that indicates an impaired macroinvertebrate community.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

Benthic Macroinvertebrates

Bioassessments

2010

5.68

5.68

VAN-F15R_NIR01A00 / Ni River / Segment begins at the confluence of an unnamed tributary to the Ni River, approximately 0.95 rivermiles downstream from the Route 608 bridge, and continues downstream until the confluence with the Po River, forming the Poni River.

Ni River Estuary Reservoir River Aquatic Life (Sq. Miles) (Acres) (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F15R-01-PH Brock Run

Cause Location: Begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.

City / County: Spotsylvania Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5A

Excursions less than the lower limit of the pH criterion range (4 of 32 samples - 12.5%) recorded at National Park Service's

station 8BRK-17-NPS in Wilderness Battlefield.

			TMDL	147
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	First	Dev. Priority	Water Size
			. Honly	
'AN-F15R BRK01B12 / Brock Run / Segment begins at the	5A pH	2014	L	3.21

VAN-F15R_BRK01B12 / Brock Run / Segment begins at the headwaters of Brock Run, and continues downstream to the confluence with Aunt Sarah Spring Creek.

Brock Run		Estuary	Reservoir	River
Aquatic Life		(Sq. Miles)	(Acres)	(Miles)
	pH - Total Impaired Size by Water Type:			3.21

Sources:

Source Unknown

York River Basin

Cause Group Code: F15R-02-BAC Brock Run

Cause Location: Begins at the confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni

River.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 10 samples - 40.0%) at station 8-BRK000.06 at Jackson Trail off

Route 613.

The Mattaponi River Watershed bacteria TMDL for the Brock Run watershed (Eq. ID Eq ID 1566) was developed and approved

by the EPA on 07/19/2016 (Fed ID 66045). The SWCB approved the TMDL on 06/27/2016.

Cycle TMDL
Cause
Assessment Unit / Water Name / Location Desc.

Cause
Category Cause Name

Cause First Dev. Water
Category Cause Name

Listed Priority Size

AN-F15R BRK01A06 / Brock Run / Segment begins at the

4A Escherichia coli (E. coli)

2008 L
2.56

VAN-F15R_BRK01A06 / Brock Run / Segment begins at the confluence with Aunt Sarah Spring Creek and continues downstream

confluence with Aunt Sarah Spring Creek and continues downstream until the confluence with the Ni River.

Brock Run Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.56

Sources:

Grazing in Riparian or Livestock (Grazing or Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Unsewered Areas

Wastes from Pets Waterfowl Wildlife Other than

stes from Pets Waterlowi Wildlife Of Waterfowl

York River Basin

Cause Group Code: F16R-01-BAC Po River

Cause Location: Begins at the confluence with Piltzer Creek and continues downstream until the confluence with the Ni River,

forming the Poni River.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (17 of 68 samples - 25.0%) at DEQ station 8-POR004.13 at Route 1 (2014 Assessment). E. coli bacteria criterion excursions (8 of 39 samples - 20.5%) at DEQ station 8-POR008.97 at Route 208 (Courthouse Rd). E. coli bacteria criterion excursions (6 of 24 samples - 25.0%) at DEQ station 8-POR016.04 at Route 608.

The Mattaponi River Watershed bacteria TMDL for the Po River watershed (Eq. ID 1575) was approved by the EPA on 07/19/2016 (Fed ID 66035). The SWCB approved the TMDL on 06/27/2016.

Assessment Unit / Water Na	nme / Location Desc.	Cause Categor	ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F16R_POR01A10 / Po Riv unnamed tributary to the Po Rive the confluence with the Ni River, t	r and continues downstream until	4A	Escherichia coli (E. coli	i)	2010	L	7.21
VAN-F16R_POR01B02 / Po Riv confluence with Glady Run and confluence with an unnamed tribu 6.69, near the upstream boundary	ontinues downstream until the utary to the Po River at rivermile	4A	Escherichia coli (E. coli	i)	2018	L	7.70
VAN-F16R_POR01C06 / Po Riv confluence with Piltzer Creek and confluence with Glady Run.		4A	Escherichia coli (E. coli	i)	2018	L	5.18
Po River				Estuary		ervoir	River
Recreation				(Sq. Miles)	(Ad	cres)	(Miles)
	Escherichia coli (E. coli) - Total	Impaired	Size by Water Type:				20.09
Sources:							
Discharges from Municipal Separate Storm Sewer Systems (MS4)	Grazing in Riparian or Shoreline Zones		ock (Grazing or g Operations)	Runoff from Forest/Grassland/Parkland		nd	
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterf	owl	Wildlife Waterfo		han	

York River Basin

Cause Group Code: F16R-02-BAC Glady Run

Cause Location: Begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (2 of 7 samples - 28.6%) at DEQ station 8-GDY003.00 at Route 649.

The Mattaponi River Watershed bacteria TMDL for the Glady Run watershed (Eq. ID 1569) was approved by the EPA on 07/19/2016 (Fed ID 66042). The SWCB approved the TMDL on 06/27/2016.

Cycle **TMDL** First Dev. Water Cause Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size Escherichia coli (E. coli) 2010 9.30 VAN-F16R_GDY01A10 / Glady Run / Segments begins at the headwaters of Glady Run and continues downstream until the confluence with the Po River. Glady Run **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 9.30

Sources:

Grazing in Riparian or Shoreline Zones Livestock (Grazing or Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Unsewered Areas

Wastes from Pets Waterfowl Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F17L-01-HG Bowies Pond

Cause Location: Includes all of Bowies Pond.

City / County: Caroline Co. Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

2012 Assessment: Excursions above the fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in tissue from three species (bowfin, chain pickerel, largemouth bass) of fish sampled (six total excursions) in 2005 at monitoring station 8-CAM001.00.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17L_CAM01A06 / Bowies Pond / Segment includes all of 5A Mercury in Fish Tissue Bowies Pond.)	2008	L	25.71
Bowies Pond	Estuary	Rese	ervoir	River
Fish Consumption	(Sq. Miles)	(Ac	res)	(Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type	:	:	25.71	

Sources:

Source Unknown

York River Basin

Cause Group Code: F17R-02-BAC Mattaponi River

Cause Location: Begins at the confluence with Matta River and continues downstream until the confluence with Polecat Creek at the

outlet of waterbody F17R.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 22 samples - 13.6%) at DEQ station 8-MPN083.62 at Route 301 (2014 Assessment). E. coli bacteria criterion (5 of 12 samples - 41.7%) at DEQ station 8-MPN090.74 at Route 722. E. coli bacteria criterion excursions (12 of 67 samples - 17.9%) at DEQ station 8-MPN094.94 at the old bridge upstream of Route 605. E. coli bacteria criterion excursions (4 of 11 samples - 36.4%) at DEQ station 8-MPN101.86 at Route 626.

The Mattaponi River Watershed bacteria TMDL for the Mattaponi River watershed (Eq. ID 1573) was approved by the EPA on 07/19/2016 (Fed ID 66038). The SWCB approved the TMDL on 06/27/2016.

Assessment Unit / Water I	Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
confluence with an unnamed tri	aponi River / Segment begins at t butary, draining from Goose Pond, I the confluence with Polecat Cree		Escherichia coli (E. coli)	2008	L	3.20
VAN-F17R_MPN02A20 / Mattaponi River / Segment begins at the 4A Escherichia coli (E. coli) confluence with South River and continues downstream until the confluence with an unnamed tributary draining from Goose Pond.)	2020	L	6.58
VAN-F17R_MPN02B02 / Mattaponi River / Segment begins at the confluence with Downers Branch and continues downstream until the confluence with the South River.					2006	L	8.24
confluence of the Matta River a	aponi River / Segment begins at t nd the Poni River, forming the downstream until the confluence v		Escherichia coli (E. coli)	2020	L	3.65
Mattaponi River				Estuary		ervoir	River
Recreation (Sq. Mile: Escherichia coli (E. coli) - Total Impaired Size by Water Type:				(Sq. Miles)	(Ac	res)	(Miles)
	Escherichia coii (E. coii) - Tota	impaire	a Size by water Type:				21.67
Sources:							
Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland		Sewage Discharges in Unsewered Areas			
Wastes from Pets	Waterfowl	Wildlif	e Other than				

Waterfowl

York River Basin

Cause Group Code: F17R-02-PH Unnamed Tributary to Poni River

Cause Location: Begins at the confluence of an unnamed tributary at rivermile 3.66 and continues downstream to the confluence

with an unnamed tributary at rivermile 0.05.

City / County: Caroline Co. Spotsylvania Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Excursions less than the lower limit of the pH criterion range (2 of 6 samples - 33.3%) at DEQ station 8-XJV001.81 at Route 660. Excursions less than the lower limit of the pH criterion range (5 of 12 samples - 41.7%) at DEQ station 8-XJV000.80 at

Route 607.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F17R_XJV01A18 / Unnamed Tributary to Poni River / Segment begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.	5C pH		2018	L	0.67
VAN-F17R_XJV02A16 / Unnamed Tributary to Poni River / Segment begins at the confluence of an unnamed tributary at rivermile 3.66 and continues downstream to the confluence with an unnamed tributary at rivermile 0.72.	5C pH		2018	L	2.93
Unnamed Tributary to Poni River		Estuary		ervoir	River
Aquatic Life		(Sq. Miles)	(Ac	res)	(Miles)
pH - Total Impaired Size by Water Type:					3.60

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F17R-03-BAC Poni River

Cause Location: Begins at the confluence with an unnamed tributary and continues downstream until the confluence with the Matta

River, forming the Mattaponi River

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (2 of 11 samples - 18.2%) at DEQ station 8-PNI002.43 at Route 606.

The Mattaponi River Watershed bacteria TMDL for the Poni River watershed (Eq. ID 1577) was approved by the EPA on 07/19/2016 (Fed ID 66031). The SWCB approved the TMDL on 06/27/2016.

Recreation					
		(Sq. Miles)	(Ac	res)	(Miles)
Poni River		Estuary	Rese	ervoir	River
VAN-F17R_PNI01A10 / Poni River / Segment begins at the confluence with an unnamed tributary and continues downstream until the confluence with the Matta River, forming the Mattaponi R			2010	L	3.21
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	TMDL Dev. Priority	Water Size

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4)	Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland
Sewage Discharges in Unsewered Areas	Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F17R-04-BAC Unnamed Tributary to Poni River

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence

with an unnamed tributary at rivermile 0.05.

City / County: Caroline Co. Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-XJV000.80 at Route 607.

A new TMDL is not required for this impaired segment of an unnamed tributary to Poni River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66031, 07/19/2016) included modeling, source identification, and reductions that covered the entire Poni River watershed (Eq. ID 1577).

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

Escherichia coli (E. coli)

2018

L

0.67

VAN-F17R_XJV01A18 / Unnamed Tributary to Poni River / Segment begins at the confluence with an unnamed tributary at rivermile 0.72 and continues downstream to the confluence with an unnamed tributary at rivermile 0.05.

Unnamed Tributary to Poni River

Recreation

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 0.67

Sources:

Discharges from Municipal Grazing in Riparian or Livestock (Grazing or Runoff from

Separate Storm Sewer Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Systems (MS4)

Sewage Discharges in Wastes from Pets Waterfowl Wildlife Other than

Unsewered Areas Waterfowl

York River Basin

Cause Group Code: F18R-02-BAC Matta River

Cause Location: Begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with the

Poni River, forming the Mattaponi River.

City / County: Caroline Co. Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (9 of 33 samples - 27.3%) at DEQ station 8-MTA001.69 at Route 632. E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-MTA008.96 at Route 646.

criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-MTA008.96 at Route 646.

The Mattaponi River Watershed bacteria TMDL for the Matta River watershed (Eq. ID 1572) was approved by the EPA on 07/19/2016 (Fed ID 66040). The SWCB approved the TMDL on 06/27/2016.

Assessment Unit / Water	Name / Location Desc.	Cause Categor	y Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
confluence with an unnamed to approximately 0.5 rivermile upon	a River / Segment begins at the ibutary to the Matta River, stream from the Route 646 bridge confluence with the Poni River,	e, and	Escherichia coli (E. coli)		2006	L	11.89
confluence of the Mat River and downstream until the confluence	a River / Segment begins at the d the Ta River and continues be with an unnamed tributary to the rivermile upstream from Route 6	he	Escherichia coli (E. coli)		2020	L	1.24
Matta River				Estuary	Res	ervoir	River
Recreation				(Sq. Miles)		res)	(Miles)
	Escherichia coli (E. coli) - To	otal Impaired	Size by Water Type:				13.13
Sources:							
Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff Forest/	from Grassland/Parkland	Sewage Unsewe		•	
Wastes from Pets	Waterfowl	Wildlife	Other than				

Waterfowl

York River Basin

Cause Group Code: F18R-02-DO Bluff Run

Cause Location: Begins at the confluence with Glebe Run and continues downstream to the confluence with Ta River.

City / County: Spotsylvania Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

Excursions less than the minimum dissolved oxygen criterion (4 of 12 samples - 33.3%) were recorded at DEQ station 8-

BLF001.48 at Route 648.

Assessment Unit / Water Name / Location Desc.

Cause
Category Cause Name

Dissolved Oxygen

Cycle TMDL First Dev. Water Listed Priority Size

L

3.07

VAN-F18R_BLF01A20 / Bluff Run / Segment begins at the confluence with Glebe Run and continues downstream to the confluence with Ta River

confluence with Ta River.

Bluff Run

Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

2020

Dissolved Oxygen - Total Impaired Size by Water Type: 3.07

Sources:

Aquatic Life

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F18R-03-BAC Mat River

Cause Location: Begins at the confluence with an unnamed tributary at rivermile 2.14 and continues downstream to the confluence

with the Ta River to form the Matta River.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-MAT001.87 at Route 647. E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 8-MAT005.35 at Route 738.

The Mattaponi River Watershed bacteria TMDL for the Mat River watershed (Eq. ID 1571) was approved by the EPA on 07/19/2016 (Fed ID 66040). The SWCB approved the TMDL on 06/27/2016.

Assessment Unit / Water	Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_MAT01A12 / Mat confluence with an unnamed tr continues downstream to the compatta River.	o o	4A Escherichia coli (E. coli) orm the		2014	L	2.30
	River / Segment begins at the inues downstream to the confluence 2.14.	4A Escherichia coli (E. coli) ence		2018	L	5.20
Mat River			Estuary		ervoir	River
Recreation			(Sq. Miles)	(Ac	res)	(Miles)
	Escherichia coli (E. coli) - To	otal Impaired Size by Water Type:				7.50
Sources:						
Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage I Unsewere		•	
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl				

York River Basin

Cause Group Code: F18R-03-BEN **Matta River**

Cause Location: Begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an

unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.

City / County: Spotsylvania Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2010 Assessment: One of two biological monitoring events in 2003 at station 8-MTA012.09 (upstream of Route 646) resulted in

a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F18R_MTA02A04 / Matta River / Segment begins at the confluence of the Mat River and the Ta River and continues downstream until the confluence with an unnamed tributary to the Matta River, approximately 0.5 rivermile upstream from Route 646.	5A	Benthic Macroinvertebrates Bioassessments	2008	L	1.24

Matta River River **Estuary** Reservoir (Sq. Miles) (Acres) (Miles) **Aquatic Life** 1.24

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F18R-04-BAC Ta River

Cause Location: Begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues

downstream until the confluence with the Mat River, forming the Matta River.

City / County: Spotsylvania Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-TAR002.40 at Route 738.

A new TMDL is not required for this impaired segment of Ta River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66039, 07/19/2016) included modeling, source identification, and reductions that covered the entire Matta River watershed (Eq. ID 1572).

Cycle **TMDL** First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

Escherichia coli (E. coli)

2018

L

3.76

VAN-F18R TAR01A00 / Ta River / Segment begins at the confluence with Bluff Run, approximately 0.7 rivermile upstream from Route 738, and continues downstream until the confluence with the Mat River, forming the Matta River.

Ta River Estuary River Reservoir (Sq. Miles) (Acres) (Miles) Recreation 3.76

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Grazing in Riparian or Livestock (Grazing or Runoff from Sewage Discharges in Feeding Operations) Shoreline Zones Forest/Grassland/Parkland **Unsewered Areas** Wastes from Pets Wildlife Other than Waterfowl Waterfowl

York River Basin

Cause Group Code: F19R-01-BAC South River

Cause Location: Begins at the headwaters of the South River and continues downstream until the confluence with the Motto River.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-STH010.79 at Route 1.

A new TMDL is not required for this impaired segment of South River because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66038, 07/19/2016) included modeling, source identification, and reductions that covered the entire Mattaponi River watershed (Eq. ID 1573).

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F19R_STH03A08 / South River / Segment begins at the headwaters of the South River and continues downstream until the confluence with the Motto River.	4A Escherichia coli (E. col)	2020	L	9.09
South River		Estuary	Res	ervoir	River

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Grazing in Riparian or Livestock (Grazing or Runoff from Sewage Discharges in Forest/Grassland/Parkland Shoreline Zones Feeding Operations) **Unsewered Areas** Wastes from Pets Waterfowl Wildlife Other than

Waterfowl

9.09

York River Basin

Cause Group Code: F19R-02-BAC Motto River

Cause Location: Begins at the confluence with an unnamed tributary, approximately 0.5 rivermile upstream from Route One, and

continues downstream until the confluence with another unnamed tributary (streamcode XCF), downstream from I-

95.

City / County: Caroline Co.

Use(s): Recreation

downstream from I-95.

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

confluence with another unnamed tributary (streamcode XCF),

2018 Assessment: E. coli bacteria criterion excursions (2 of 8 samples - 25.0%) at DEQ station MOT002.62 at Route 1.

The Mattaponi River Watershed bacteria TMDL for the Motto River watershed (Eq. ID 1574) was approved by the EPA on 07/19/2016 (Fed ID 66036). The SWCB approved the TMDL on 06/27/2016.

Cycle **TMDL** First Dev. Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size VAN-F19R MOT01A04 / Motto River / Segment begins at the 4A Escherichia coli (E. coli) 2014 L 1.80 confluence with an unnamed tributary, approximately 0.5 rivermile upstream from Route One, and continues downstream until the

Motto River

Recreation

Estuary (Sq. Miles)

(Sq. Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

1.80

Sources:

Grazing in Riparian or Shoreline Zones Livestock (Grazing or Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Unsewered Areas

Wastes from Pets Waterfowl Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F19R-02-PH Hobby Swamp

Cause Location: Begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from

Route 634, and continues downstream until the confluence with the South River.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Excursions less than the lower limit of the pH criterion range (9 of 9 samples - 100.0%) at DEQ station 8-HBS001.85 at Route

634

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

5C pH

VAN-F19R_HBS01A00 / Hobby Swamp / Segment begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from Route 634, and

continues downstream until the confluence with the South River.

Hobby Swamp

Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

pH - Total Impaired Size by Water Type: 1.27

2020

1.27

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F19R-03-BAC Hobby Swamp

Cause Location: Begins at the confluence with an unnamed tributary to Hobby Swamp, approximately 0.36 rivermile upstream from

Route 634, and continues downstream until the confluence with the South River.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 9 samples - 33.3%) at DEQ station 8-HBS001.85 at Route 634.

A new TMDL is not required for this impaired segment of Hobby Swamp because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66038, 07/19/2016) included modeling, source identification, and reductions that covered the entire Mattaponi River watershed (Eq. ID 1573).

Cycle **TMDL** First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size VAN-F19R HBS01A00 / Hobby Swamp / Segment begins at the Escherichia coli (E. coli) 2020 L 1.27 confluence with an unnamed tributary to Hobby Swamp. approximately 0.36 rivermile upstream from Route 634, and continues downstream until the confluence with the South River. Hobby Swamp Estuary River Reservoir (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.27

Sources:

Grazing in Riparian or Shoreline Zones Livestock (Grazing or Shoreline Zones Feeding Operations) Runoff from Forest/Grassland/Parkland Unsewered Areas

Wastes from Pets Waterfowl Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F20R-01-BEN Polecat Creek

Cause Location: Begins at the confluence with Hackett Creek, approximately 0.5 rivermile upstream from Route 207, and continues

downstream until the confluence with the Mattaponi River.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2018 Assessment: Two biological monitoring events at station 8-PCT002.29 at Route 601 in 2011 resulted in a VSCI

assessment that indicates an impaired macroinvertebrate community.

First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed **Priority** Size VAN-F20R_PCT01A00 / Polecat Creek / Segment begins at the Benthic Macroinvertebrates 2014 5.24 Bioassessments confluence with an unnamed tributary at rivermile 5.0 and continues downstream until the confluence with the Mattaponi River.

Polecat Creek

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Benthic Macroinvertebrates Bioassessments - Total Impaired Size by Water Type: 5.24

Cycle

TMDL

Sources:

Source Unknown

York River Basin

Cause Group Code: F20R-01-DO **Polecat Creek**

Cause Location: Begins at the confluence with Stevens Mill Run and continues downstream until the confluence with an unnamed

tributary at rivermile 5.0.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

2018 Assessment: Excursions less than the minimum dissolved oxygen criterion (5 of 8 samples - 50.0%) at station 8-PCT005.44 at Polecat Creek below Caroline County POTW; excursions less than the minimum dissolved oxygen criterion (5 of

8 samples - 62.5%) at station 8-PCT006.34 at Route 207.

Cycle **TMDL** First Dev. Cause Water Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size Dissolved Oxygen 2018 4.34

VAN-F20R_PCT01B06 / Polecat Creek / Segment begins at the confluence with Stevens Mill Run and continues downstream until the confluence with an unnamed tributary at rivermile 5.0.

Polecat Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life** 4.34

Dissolved Oxygen - Total Impaired Size by Water Type:

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F20R-02-BAC **Polecat Creek**

Cause Location: Begins at the headwaters of Polecat Creek and continues downstream until the confluence with Stevens Mill Run.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-PCT010.10 at Route 652.

The Mattaponi River Watershed bacteria TMDL for the Polecat Creek watershed (Eq. ID 1576) was approved by the EPA on 07/19/2016 (Fed ID 66034). The SWCB approved the TMDL on 06/27/2016.

Sources:							
Escherichia coli (E. coli) - Total Impaired Size by Water Type:							
Recreation				(Sq. Miles)		cres)	(Miles)
Polecat Creek				Estuary	Res	ervoir	River
	cat Creek / Segment begins at the nd continues downstream until the un.	4A	Escherichia coli (E. coli)	2012	L	5.31
Assessment Unit / Water	Name / Location Desc.	Cause Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

York River Basin

Cause Group Code: F21R-01-BAC Boot Swamp

Cause Location: Begins at the confluence with Malden Creek and continues downstream to the confluence with Mattaponi River.

City / County: Caroline Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

Excursions from the maximum E. coli bacteria criterion (3 of 12 samples - 25%) at DEQ station 8-BOT002.14 at Route 600.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F21R_BOT01A20 / Boot Swamp / Segment begins at the confluence with Malden Creek and continues downstream to the confluence with Mattaponi River.

Boot SwampEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.68

5A Escherichia coli (E. coli)

2020

1.68

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-01-BEN Herring Creek

Cause Location: Begins at the headwaters of Herring Creek and continues downstream until the confluence with Millpond Creek.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

2008 Assessment: Two biological monitoring events in 2002 at DEQ station 8-HER012.99 (downstream of Route 601) resulted in a VCPMI assessment that indicates an impaired macroinvertebrate community.

_ ~	ause regory Cause Name	Cycle TMDL First Dev. Listed Priority	Water
VAN-F21R_HER02A04 / Herring Creek / Segment begins at the headwaters of Herring Creek and continues downstream until the confluence with Millpond Creek.	5A Benthic Macroinvertebrates Bioassessments	2008 L	4.75
Herring Creek	Estuary (Sg. Miles)	Reservoir (Acres)	River (Miles)
Aquatic Life Benthic Macroinvertebrates Bioassessments - Total Imp	,	(Acres)	4.75

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-01-HG Herring Creek

Cause Location: Extends from the Route 628 bridge (Dorrell Road) to the confluence with the Mattaponi River.

City / County: King William Co. Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, mercury fish consumption advisory. The advisory, dated 09/30/04, limits bluegill sunfish and yellow bullhead catfish consumption to no more than two meals per month.

Additionally, exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in two fish species (flier sunfish and largemouth bass) collected in 2003 at DEQ station 8-HER005.12.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_HER01A06 / Herring Creek / Segment begins at the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14, and continues downstream until the confluence with the Mattaponi River.	5A Mercury in Fish Tissue		2006	L	2.14
VAN-F21R_HER01B02 / Herring Creek / Segment begins at the confluence with Dorrell Creek and continues downstream until the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14.	5A Mercury in Fish Tissue		2006	L	5.09
Herring Creek		Estuary		ervoir	River
Fish Consumption		(Sq. Miles)	(Ac	res)	(Miles)
Mercury in Fish Tissue - Total Impaired Size by Water Type:				7.23	

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-02-BEN Reedy Creek

Cause Location: Begins at Route 301 and continues downstream until the start of Reedy Millpond. Class VII waters.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Two biological monitoring events in 2011 at DEQ station 8-RDY003.43 at Route 648 resulted in a VSCI assessment that indicates an impaired macroinvertebrate community.

Assessment Unit / Water Name / Location Desc.	Cause	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_RDY02A10 / Reedy Creek / Segment begins at Rout 301 and continues downstream until the start of Reedy Millpond.	te 5A	Benthic Macroinvertebra Bioassessments	ates	2014	L	3.30
Reedy Creek Aquatic Life			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total	Impaire	d Size by Water Type:	,	`	,	3.30

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-02-HG Mattaponi River

Cause Location: Extends from the Route 628 bridge and continues downstream approximately 55 miles, to the confluence with

Pamunkey River near West Point.

City / County: King And Queen Co. King William Co.

Use(s): Fish Consumption

MPNOH
Draft 2020

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, mercury fish consumption advisory. The advisory, dated 09/30/04, limits largemouth bass consumption to no more than two meals per month.

	Cause Catego	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_MPN01A06 / Mattaponi River / Segment begins at the confluence with Gravel Run and continues downstream until the confluence with Herring Creek.	5A	Mercury in Fish Tissue	2006	L	6.07
VAN-F21R_MPN01B02 / Mattaponi River / Segment begins at the Route 628 crossing and continues downstream until the confluence with Gravel Run.	5A	Mercury in Fish Tissue	2006	L	4.91
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek.	5A	Mercury in Fish Tissue	2006	L	0.159
MPNTF VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek.	5A	Mercury in Fish Tissue	2006	L	1.756
MPNTF VAP-F23R_MPN01A00 / Mattaponi River / From the watershed boundary (Herring Creek) to the limit of tide near the Route 360 bridge.	5A	Mercury in Fish Tissue	2006	L	4.72
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal freshwater/oligohaline boundary at approximately river mile 18	5A	Mercury in Fish Tissue	2006	L	1.384
MPNTF					
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602	5A	Mercury in Fish Tissue	2006	L	0.423
MPNOH					
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek.	5A	Mercury in Fish Tissue	2010	L	0.717
MPNOH					
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004G, 8/15/2018	5A	Mercury in Fish Tissue	2010	L	1.292
MPNOH					
VAP-F25E_MPN05B06 / Mattaponi River / From VDH-SFC 049-004B, 8/15/2018 to the oligohaline/York mesohaline boundary.	5A	Mercury in Fish Tissue	2010	L	0.384

Appendix 5 - 3270

York River Basin

VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi 5A Mercury in Fish Tissue 2010 L 0.209 mainstem within VDH advisory 049-004F, 8/15/2018.

YRKMH

VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS 5A Mercury in Fish Tissue 2010 L 0.641 condemnation 049-004A, 8/15/2018 within Mattaponi River mainstem.

YRKMH

Mattaponi River

Fish Consumption

Mercury in Fish Tissue - Total Impaired Size by Water Type:

Reservoir (Acres)

River (Miles)

Reservoir (Miles)

15.70

Sources:

Atmospheric Deposition - Source Unknown Toxics

York River Basin

Cause Group Code: F21R-03-BAC **Reedy Creek**

Cause Location: Begins at the headwaters of Reedy Creek and continues downstream until the start of Reedy Millpond.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 23 samples - 13.0%) at DEQ station 8-RDY003.43 at Route 648 (2014 Assessment).

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-RDY004.39 at Route 301/2.

The Mattaponi River Watershed bacteria TMDL for the Reedy Creek watershed (Eq. ID 1578) was approved by the EPA on 07/19/2016 (Fed ID 66030). The SWCB approved the TMDL on 06/27/2016.

Escherichia coli (E. coli) - Total Im	paired	I Size by Water Type:				12.69
			(= -1:	(, , ,	,	,
Recreation			Estuary (Sq. Miles)		ervoir :res)	River (Miles)
Reedy Creek						
VAN-F21R_RDY02B10 / Reedy Creek / Segment begins at the neadwaters of Reedy Creek and continues downstream to Route 301 oridge.	4A	Escherichia coli (E. coli)	2010	L	9.39
VAN-F21R_RDY02A10 / Reedy Creek / Segment begins at Route 301 and continues downstream until the start of Reedy Millpond.	4A	Escherichia coli (E. coli)	2010	L	3.30
_	Cause atego	e ry Cause Name		First Listed	Dev. Priority	Water Size

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

York River Basin

Cause Group Code: F21R-03-HG Reedy Creek and Reedy Millpond

Cause Location: Begins at the 301 bridge and continues downstream to the confluence with the Mattaponi River.

City / County: Caroline Co. King And Queen Co. King William Co.

Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, mercury fish consumption advisory. The advisory, dated 10/07/09, limits redbreast sunfish and yellow bullhead catfish consumption to no more than two meals per month.

Additionally, exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury in fish tissue were recorded at DEQ station 8-RDY003.43 in one species of fish (creek chubsucker) in samples collected in 2003 and in three species of fish (yellow bullhead catfish, bluegill sunfish, and redbreast sunfish) in samples collected in 2008. Four exceedances of the water quality criterion based fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in two species of fish (bowfin, largemouth bass) sampled in 2003 at DEQ station 8-RDY000.87.

Mercury in Fish Tissue - Total Im	paire	d Size by Water Type:		4	41.25	12.82
Reedy Creek and Reedy Millpond Fish Consumption			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
VAN-F21R_RDY02B10 / Reedy Creek / Segment begins at the headwaters of Reedy Creek and continues downstream to Route 301 bridge.	5A	Mercury in Fish Tissue		2010	L	9.39
VAN-F21R_RDY02A10 / Reedy Creek / Segment begins at Route 301 and continues downstream until the start of Reedy Millpond.	5A	Mercury in Fish Tissue		2010	L	3.30
VAN-F21R_RDY01A10 / Reedy Creek / Segment begins at the outlet of Reedy Millpond and continues downstream to the confluence with the Mattaponi River.	5A	Mercury in Fish Tissue		2010	L	0.13
$VAN\mbox{-}F21L_RDY01A06\ /\ Reedy\ Millpond\ /\ Segment\ includes\ all\ of\ Reedy\ Millpond.$	5A	Mercury in Fish Tissue		2010	L	41.25
	Caus atego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-04-BAC Chapel Creek

Cause Location: Begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi

River.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-CPL004.15 at Route 721.

The Mattaponi River Watershed bacteria TMDL for the Chapel Creek watershed (Eq. ID 1567) was approved by the EPA on 07/19/2016 (Fed ID 66044). The SWCB approved the TMDL on 06/27/2016.

Cycle **TMDL** First Dev. Water Cause Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name Escherichia coli (E. coli) 2014 4.64 VAN-F21R_CPL01A06 / Chapel Creek / Segment begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River. **Chapel Creek** Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

4.64

Sources:

Grazing in Riparian or Shoreline Zones Eeding Operations)

Wastes from Pets

Livestock (Grazing or Feeding Operations)

Forest/Grassland/Parkland

Wildlife Other than Waterfowl

Waterfowl

York River Basin

Cause Group Code: F21R-04-PH Chapel Creek

Cause Location: Begins at the perennial headwaters of Chapel Creek and continues downstream to the upstream boundary of

Garnett Millpond. Begins again at the confluence with Beaver Branch and continues downstream until the

confluence with the Mattaponi River.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Excursions less than the lower limit of the pH criterion range (3 of 28 samples - 10.7%) at DEQ station 8-CPL004.15 at Route 721. Excursions less than the lower limit of the pH criterion range (4 of 12 samples - 33.3%) at station 8-CPL011.27 at Route 623.

pH - Total	I Impaired Size by Water Type	e:			8.57
Aquatic Life		(Sq. Miles)	(Ac	res)	(Miles)
Chapel Creek		Estuary	Res	ervoir	River
VAN-F21R_CPL02A18 / Chapel Creek / Segment begins at the perennial headwaters of Chapel Creek and continues downstream the upstream boundary of Garnett Millpond.			2018	L	3.93
VAN-F21R_CPL01A06 / Chapel Creek / Segment begins at the confluence with Beaver Branch and continues downstream until the confluence with the Mattaponi River.			2008	L	4.64
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F21R-05-BAC Herring Creek

Cause Location: Begins at the confluence with Dorrell Creek and continues downstream until the confluence with the Mattaponi River

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (4 of 24 samples - 16.7%) at DEQ station 8-HER000.33 at Route 600. E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-HER005.12 at Route 609.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAN-F21R_HER01A06 / Herring Creek / Segment begins at the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14, and continues downstream until the confluence with the Mattaponi River.	5A Escherichia coli (E. coli)	2018	L	2.14
VAN-F21R_HER01B02 / Herring Creek / Segment begins at the confluence with Dorrell Creek and continues downstream until the confluence with an unnamed tributary to Herring Creek, at rivermile 2.14.	5A Escherichia coli (E. coli)	2016	L	5.09
Herring Creek		Estuary		ervoir	River
Recreation		(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:					7.23

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-07-BAC Mattaponi River

Cause Location: Begins at the confluence with Union Swamp, at rivermile 76.58, and continues downstream until the confluence with

Cobbin Creek, at rivermile 67.64.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (2 of 13 samples - 15.4%) at DEQ station 8-MPN073.75 at Route 647.

Cycle **TMDL** First Dev. Cause Water Listed Priority Category Cause Name Size Assessment Unit / Water Name / Location Desc.

VAN-F21R_MPN02A02 / Mattaponi River / Segment begins at the 5A Escherichia coli (E. coli) confluence with Union Swamp, at rivermile 76.58, and continues

downstream until the confluence with Cobbin Creek, at rivermile

67.64.

Mattaponi River **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

> Escherichia coli (E. coli) - Total Impaired Size by Water Type: 8.87

2018

L

8.87

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-08-BAC **Dorrell Creek**

Cause Location: Begins at the confluence with Little Dorrell Creek and continues downstream to the confluence with Herring Creek.

City / County: Caroline Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (2 of 12 samples - 16.7%) at DEQ station 8-DRL000.85 at Route 608.

Cycle **TMDL** First Dev. Water Cause Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size

VAN-F21R_DRL01A18 / Dorrell Creek / Segment begins at the confluence with Little Dorrell Creek and continues downstream to the

confluence with Herring Creek.

Dorrell Creek Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 4.96

Escherichia coli (E. coli)

4.96

2018

Sources:

Source Unknown

York River Basin

Cause Group Code: F21R-09-BAC **Gravel Run**

Cause Location: Begins at the perennial headwaters of Gravel Run and continues downstream to the confluence with Mattaponi

City / County: King And Queen Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

E. coli bacteria criterion excursions (5 of 12 samples - 41.7%) at DEQ station 8-GVL000.56 at Route 628.

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name Escherichia coli (E. coli) 2018 L 3.54

VAN-F21R_GVL01A18 / Gravel Run / Segment begins at the perennial headwaters of Gravel Run and continues downstream to the confluence with Mattaponi River.

Gravel Run **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation 3.54

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F22L-01-HG Collins Pond

Cause Location: Segment includes all of Collins Pond.

City / County: Caroline Co. Use(s): Fish Consumption

Cause(s) / VA Category: Mercury in Fish Tissue / 5A

2010 Assessment: Excursions above the fish tissue value (TV) of 300 parts per billion (ppb) for mercury (Hg) in fish tissue were recorded in tissue from two species (largemouth bass, yellow bullhead catfish) of fish samples (three total excursions) collected in 2003 at monitoring station 8-DOC003.63.

	Mercury in Fish Tissue - Total	Impaired	Size by Water Type:			63.93	
Collins Pond Fish Consumption				Estuary (Sq. Miles)		ervoir res)	River (Miles)
VAN-F22L_DOC01A06 / Collins Pond.	Collins Pond / Segment includes all of	5A	Mercury in Fish Tissue		2010	L	63.93
Assessment Unit / W	/ater Name / Location Desc.	Cause Catego	ry Cause Name		First Listed	TMDL Dev. Priority	Water Size

Sources:

Source Unknown

York River Basin

Cause Group Code: F22R-01-BAC Maracossic Creek

Cause Location: Begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run. Begins

again at the confluence with Beverly Run and continues downstream until the confluence with the Mattaponi River.

City / County: Caroline Co. King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (8 of 35 samples - 22.9%) at DEQ station 8-MAR003.24 at Route 627. E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-MAR011.09 at Route 721. E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at station 8-MAR014.20 at Route 641.

The Mattaponi River Watershed bacteria TMDL for the Maracossic Creek watershed (Eq. ID 1570) was approved by the EPA on 07/19/2016 (Fed ID 66041). The SWCB approved the TMDL on 06/27/2016.

Escherichia coli (E. coli) - Total Impaired Size by Water Type:					16.11	
Recreation			Estuary (Sq. Miles)		ervoir res)	River (Miles)
VAN-F22R_MAR04A08 / Maracossic Creek / Segment begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run. Maracossic Creek	4A	Escherichia coli (E. coli)		2018	L 	6.77
VAN-F22R_MAR03A08 / Maracossic Creek / Segment begins at the confluence with Jones Run and continues downstream until the confluence with Doctors Creek.	4A	Escherichia coli (E. coli)		2020	L	5.13
$VAN-F22R_MAR01A02\ /\ Maracossic\ Creek\ /\ Segment\ begins\ at$ the confluence with Beverly Run and continues downstream until the confluence with the Mattaponi River.	4A	Escherichia coli (E. coli)		2006	L	4.21
Assessment Unit / Water Name / Location Desc. C	Caus	e ory Cause Name		First Listed	TMDL Dev. Priority	Water Size

Sources:

Grazing in Riparian or Shoreline Zones	Livestock (Grazing or Feeding Operations)	Runoff from Forest/Grassland/Parkland	Sewage Discharges in Unsewered Areas
Wastes from Pets	Waterfowl	Wildlife Other than Waterfowl	

York River Basin

Cause Group Code: F22R-02-BAC Doctors Creek

Cause Location: Begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic

Creek.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 12 samples - 33.3%) at DEQ station 8-DOC000.69 at Route 644. The Mattaponi River Watershed bacteria TMDL for the Doctors Creek watershed (Eq. ID 1568) was approved by the EPA on

07/19/2016 (Fed ID 66043). The SWCB approved the TMDL on 06/27/2016.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cause First Dev. Water
Category Cause Name
Listed Priority Size
AN-F22R DOC01A08 / Doctors Creek / Segment begins at the 4A Escherichia coli (E. coli)
2014 L 2.32

VAN-F22R_DOC01A08 / Doctors Creek / Segment begins at the confluence with Tanyard Swamp and continues downstream until the

confluence with Maracossic Creek.

Doctors Creek

Recreation

Reservoir River (Sq. Miles)

Reservoir (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 2.32

Sources:

Grazing in Riparian or Livestock (Grazing or Shoreline Zones Feeding Operations) Forest/Grassland/Parkland Unsewered Areas

Wastes from Pets Waterfowl Wildlife Other than

stes from Pets Waterfowl Wildlife Of Waterfowl

York River Basin

Cause Group Code: F22R-02-PH Root Swamp

Cause Location: Begins at the headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Excursions less than the lower limit of the pH criterion range (3 of 19 samples - 15.8%) at DEQ station 8-ROT001.09 at Route 721 and excursions less than the lower limit of the pH criterion range (5 of 11 samples - 45.5%) at DEQ station 8-ROT003.65 at Route 649.

Cycle TMDL

7.83

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Nam	ne List		Water / Size
VAN-F22R_ROT01A06 / Root Swamp / Segment begins at the headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.	5C pH	200)6 L	7.83
Root Swamp		Estuary I	Reservoir	River
Aquatic Life		(Sq. Miles)	(Acres)	(Miles)

pH - Total Impaired Size by Water Type:

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F22R-03-BAC **Root Swamp**

Cause Location: Begins at the confluence with Cook Swamp and continues downstream until the confluence with Beverly Run.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

2018 Assessment: E. coli bacteria criterion excursions (4 of 18 samples - 22.2%) at station 8-ROT001.09 at Route 721.

The Mattaponi River Watershed bacteria TMDL for the Root Swamp watershed (Eq. ID 1579) was approved by the EPA on 07/19/2016 (Fed ID 66029). The SWCB approved the TMDL on 06/27/2016.

Cycle First Dev. Water Cause Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size Escherichia coli (E. coli) 2014 7.83 VAN-F22R_ROT01A06 / Root Swamp / Segment begins at the

headwaters of Root Swamp and continues downstream until the confluence with Beverly Run.

Root Swamp **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 7.83

TMDL

Sources:

Grazing in Riparian or Livestock (Grazing or Runoff from Sewage Discharges in Forest/Grassland/Parkland Shoreline Zones Feeding Operations) **Unsewered Areas** Wastes from Pets Waterfowl Wildlife Other than Waterfowl

York River Basin

Cause Group Code: F22R-03-DO **Unnamed tributary to Root Swamp**

Cause Location: Begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence

with Root Swamp.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

2008 Assessment: Excursions less than the minimum dissolved oxygen criterion (2 of 6 samples - 33.3%) at DEQ station 8-

XDY000.27 at Route 689.

Cycle **TMDL** Cause First Dev. Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed **Priority** Size

VAN-F22R_XDY01A06 / Unnamed tributary to Root Swamp / Segment begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root

Swamp.

Unnamed tributary to Root Swamp **Estuary** Reservoir River (Acres)

(Sq. Miles) (Miles) **Aquatic Life** 0.70

Dissolved Oxygen - Total Impaired Size by Water Type:

Dissolved Oxygen

2006

0.70

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F22R-03-PH **Unnamed tributary to Root Swamp**

Cause Location: Begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence

with Root Swamp.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

2008 Assessment: Excursions less than the lower limit of the pH criterion range (6 of 6 samples - 100%) at DEQ station 8-

XDY000.27 at Route 689.

Cycle **TMDL** Cause First Dev. Water **Priority** Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Size 0.70

5C pH

VAN-F22R_XDY01A06 / Unnamed tributary to Root Swamp / Segment begins at the headwaters of an unnamed tributary to Root Swamp and continues downstream until the confluence with Root

Swamp.

Unnamed tributary to Root Swamp **Estuary** Reservoir River

(Sq. Miles) (Acres) (Miles) **Aquatic Life** 0.70

pH - Total Impaired Size by Water Type:

2006

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F22R-04-BAC Beverly Run

Cause Location: Begins at the confluence with Mason Swamp and continues downstream until the confluence with King and Queen

Swamp.

City / County: Caroline Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

E. coli bacteria criterion excursions (3 of 12 samples - 25.0%) at DEQ station 8-BEV006.78 at Route 630.

A new TMDL is not required for this impaired segment of Beverly Run because the downstream Mattaponi River Watershed bacteria TMDL (Fed ID 66041, 07/19/2016) included modeling, source identification, and reductions that covered the entire Maracossic Creek watershed. The SWCB approved the TMDL on 6/27/2016.

Cycle **TMDL** First Dev. Water Category Cause Name Listed Priority Size Assessment Unit / Water Name / Location Desc. VAN-F22R_BEV01B00 / Beverly Run / Segment begins at the Escherichia coli (E. coli) 2016 L 3.07 confluence with Mason Swamp and continues downstream until the confluence with King and Queen Swamp. Beverly Run Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation Escherichia coli (E. coli) - Total Impaired Size by Water Type: 3.07

Sources:

Grazing in Riparian or Shoreline Zones Wastes from Pets Livestock (Grazing or Feeding Operations)

Waterfowl

Runoff from Forest/Grassland/Parkland Wildlife Other than Waterfowl Sewage Discharges in Unsewered Areas

York River Basin

Cause Group Code: F22R-04-PH Beverly Run

Cause Location: Begins at the confluence with Shady Grove Run and continues downstream until the confluence with Mason

Swamp.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

2018 Assessment: Excursions less than the lower limit of the pH criterion range (6 of 11 samples - 54.5%) at DEQ station 8-

BEV008.47 at Route 665.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

5C pH

VAN-F22R_BEV02A08 / Beverly Run / Segment begins at the outlet of White Lake and continues downstream until the confluence

with Mason Swamp.

Beverly Run

Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

PH - Total Impaired Size by Water Type:

pH - Total Impaired Size by Water Type: 2.58

2008

2.58

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F22R-05-PH Doctors Creek

Cause Location: Begins at the confluence with Tanyard Swamp and continues downstream until the confluence with Maracossic

Creek.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

2018 Assessment: Excursions less than the lower limit of the pH criterion range (5 of 17 samples - 29.4%) at DEQ station 8-

DOC000.69 at Route 644.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAN-F22R_DOC01A08 / Doctors Creek / Segment begins at the 5C pH confluence with Tanyard Swamp and continues downstream until the

confluence with Maracossic Creek.

Doctors Creek

Aquatic Life

Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

pH - Total Impaired Size by Water Type: 2.32

2008

2.32

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F22R-06-PH Maracossic Creek

Cause Location: Begins at the outlet of Broaddus Pond and continues downstream until the confluence with Jones Run.

City / County: Caroline Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Excursions less than the lower limit of the pH criterion range (3 of 12 samples - 25.0%) at DEQ station 8-MAR014.20 at Route

641.

Cycle TMDL
Cause
Cause
First Dev. Water
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Listed Priority Size
AN-F22R MAR04A08 / Maracossic Creek / Segment begins at 5C pH
2018 L 6.77

VAN-F22R_MAR04A08 / Maracossic Creek / Segment begins at the outlet of Broaddus Pond and continues downstream until the

confluence with Jones Run.

Maracossic Creek
Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

pH - Total Impaired Size by Water Type:

6.77

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F23E-02-BAC Mattaponi River

Cause Location: The mainstem Mattaponi River from Ayletts Creek to the confluence with Garnetts Creek.

City / County: King And Queen Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2016 cycle, the Mattaponi River from Ayletts Creek to Garnetts Creek was assessed as impaired of the Recreation

Use due to an E. coli exceedance rate of 2/9 at 8-MPN034.33 (pier at Rosepont.)

Continued monitoring is recommended due to an acceptable exceedance rate at 8-MPN029.08 (Rt. 629 bridge near Walkerton.)

Cause Cycle TMDL
First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to 5A Escherichia coli (E. coli) 2016 L 1.756

Garnetts Creek.

MPNTF

Mattaponi River

Recreation

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.756

Sources:

Source Unknown

York River Basin

Cause Group Code: F23E-03-BAC Mattaponi River

Cause Location: The mainstem Mattaponi River from the limit of tide to the confluence with Aylett Creek.

City / County: King And Queen Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2020 cycle, the Mattaponi River from the tidal limit to Ayletts Creek was impaired of the Recreation Use due to an E.

coli exceedance rate of 5/33 at 8-MPN039.10.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Cycle TMDL First Dev. Water Listed Priority Size

VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide

5A Escherichia coli (E. coli)

2020 L 0.159

above the Route 360 bridge to Aylett Creek.

MPNTF

Mattaponi River

Estuary Reservoir River

(Sq. Miles) (Acres) (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 0.159

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-01-BAC Garnetts Creek

Cause Location: The mainstem of Garnetts Creek from the confluence with Dickeys Swamp to the tidal limit.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2010 cycle, Garnetts Creek from the confluence with Dickeys Swamp downstream to the tidal limit was assessed as impaired of the Recreation Use due to E. coli violations at the Route 633 bridge (8-GNT001.54).

The exceedance rate was 6/23 during the 2014 cycle and 3/12 during the 2020 cycle.

Cause Assessment Unit / Water Name / Location Desc. Category Cause Name	F	ycle TMDL irst Dev. sted Priority	Water Size
VAP-F23R_GNT01A00 / Garnetts Creek / Dickeys Swamp to tidal 5A Escherichia collimit	oli (E. coli) 2	010 H	2.83
Garnetts Creek Recreation	Estuary (Sq. Miles)	Reservoir (Acres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Wate	er Type:		2.83

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-03-DO Walkerton Branch

Cause Location: Watershed upstream of Walkerton Millpond

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

Walkerton Branch was initially assessed as not supporting of the Aquatic Life Use for dissolved oxygen in 2006 based on exceedances at Route 636 (8-WKN003.16).

Additional monitoring was conducted during the 2014 cycle. The segment remained impaired for dissolved oxygen with an exceedance rates of 3/11.

Cyclo TMDI

Dissolved Oxygen - Total	Impaired Size by Water Type:				4.62
Aquatic Life		(Sq. Miles)		cres)	(Miles)
Walkerton Branch		Estuary	Res	ervoir	River
$\label{lem:condition} VAP\text{-}F23R_WKN01A00\ /\ Walkerton\ Branch\ /\ Watershed\ above\ Walkerton\ Millpond.$	5C Dissolved Oxygen		2006	L	4.62
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F23R-03-PH Walkerton Branch

Cause Location: Watershed upstream of Walkerton Millpond

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: pH / 5C

Walkerton Branch was initially assessed as not supporting of the Aquatic Life Use goal in 2004 based on pH exceedances at

Route 636 (8-WKN003.16).

Additional monitoring was conducted during the 2014 cycle. The segment remained impaired for pH with an exceedance rate

of 4/11.

Assessment Unit / Water Name / Location Desc. VAP-F23R_WKN01A00 / Walkerton Branch / Watershed above	Cause Category Cause Name 5C pH	Li	rirst sted 2004	Dev. Priority L	Water Size 4.62
Walkerton Millpond. Walkerton Branch		Estuary	Rese	ervoir	River
Aquatic Life		(Sq. Miles)		res)	(Miles)

pH - Total Impaired Size by Water Type:

4.62

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F23R-04-BAC Aylett Creek

Cause Location: The mainstem of Aylett Creek.

City / County: King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2012 cycle, Aylett Creek was impaired of the Recreation Use due to an E. coli violation rate of 3/11 at 8-AYL002.27,

which is located at the Route 600 bridge.

The exceedance rate was 6/12 during the 2020 cycle.

Cause Assessment Unit / Water Name / Location Desc. Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_AYL01A12 / Aylett Creek / Headwaters to mouth at 5A Escherichia coli (E. coli) Mattaponi River		2012	Н	6.83
Aylett Creek Recreation	Estuary (Sq. Miles)		ervoir eres)	River (Miles)
Escherichia coli (E. coli) - Total Impaired Size by Water Type:				6.83

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-05-BEN Fleets Creek

Cause Location: Fleets Creek from its headwaters to its mouth.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

During the 2018 cycle, Fleets Creek was assessed as impaired of the Aquatic Life Use due to benthic alteration during

sampling in 2015 at 2-FTS001.98.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_FTS01A10 / Fleets Creek / Headwaters to mouth at Dickeys Swamp	5A Benthic Macroinvertebrates Bioassessments	S	2018	L	5.01
Fleets Creek Aquatic Life Benthic Macroinvertebrates Bioassessments - Total	(\$	Estuary Sq. Miles)		ervoir cres)	River (Miles) 5.01

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-06-PCB Mattaponi River

Cause Location: The Mattaponi River from the Route 628 bridge downstream to the mouth at West Point.

City / County: King And Queen Co. King William Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A

During the 1998 cycle, the Mattaponi River from Herring Creek to the tidal limit was considered fully supporting but threatened of the Fish Consumption Use due to exceedance of a PCB screening value in 1 species (white perch) in 1996.

During the 2006 cycle, 2003 monitoring at 8-MPN041.41 indicated exceedances of the fish tissue level for PCBs in 2 species. In addition, the VDH issued a fish consumption advisory on 12/13/2004 for PCBs from Herring Creek to Aylett Creek which recommends that adults eat no more than 2 meals/month of anadromous striped bass, white perch, and gizzard shad. The TMDL is due in 2018.

The advisory was revised on 10/7/2009. The advisory now extends from Route 628 downstream approximately 55 miles to the mouth of the Mattaponi at West Point. No more than two meals/month of anadromous (coastal) striped bass, white perch, and gizzard shad are recommended due to PCBs.

The advisory is based on the results of DEQ's fish tissue monitoring program, which indicated PCB exceedances at 8-MPN029.08, 8-MPN014.33 and 8-MPN041.41.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size	
VAN-F21R_MPN01A06 / Mattaponi River / Segment begins at the confluence with Gravel Run and continues downstream until the confluence with Herring Creek.	e 5A	PCBs in Fish Tissue	2010	L	6.07	
VAN-F21R_MPN01B02 / Mattaponi River / Segment begins at the Route 628 crossing and continues downstream until the confluence with Gravel Run.		PCBs in Fish Tissue	2010	L	4.91	
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek.	5A	PCBs in Fish Tissue	2006	L	0.159	
MPNTF						
VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek.	5A	PCBs in Fish Tissue	2010	L	1.756	
MPNTF						
VAP-F23R_MPN01A00 / Mattaponi River / From the watershed boundary (Herring Creek) to the limit of tide near the Route 360 bridge.	5A	PCBs in Fish Tissue	2006	L	4.72	
VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tida freshwater/oligohaline boundary at approximately river mile 18	5A	PCBs in Fish Tissue	2010	L	1.384	
MPNTF						
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602	5A	PCBs in Fish Tissue	2010	L	0.423	
MPNOH						
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek.	5A	PCBs in Fish Tissue	2010	L	0.717	

MPNOH

York River Basin VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004G, 8/15/2018	5A	PCBs in Fish Tissue		2010	L	1.292
MPNOH VAP-F25E_MPN05B06 / Mattaponi River / From VDH-SFC 049-004B, 8/15/2018 to the oligohaline/York mesohaline boundary.	5A	PCBs in Fish Tissue		2010	L	0.384
MPNOH VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004F, 8/15/2018.	5A	PCBs in Fish Tissue		2010	L	0.209
YRKMH VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 8/15/2018 within Mattaponi River mainstem. YRKMH	5A	PCBs in Fish Tissue		2010	L	0.641
Mattaponi River Fish Consumption PCBs in Fish Tissue - Total Imp	oaired	d Size by Water Type:	Estuary (Sq. Miles) 6.965	•	ervoir res)	River (Miles)

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-08-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from the confluence with Dogwoods Fork downstream to the Route 620 bridge.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2014 cycle, Dickeys Swamp from Dogwoods Fork downstream to the Route 620 bridge was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at station 8-DKW004.31. Monitoring at station 8-DKW001.12 was acceptable (0/12).

In the 2020 cycle, the segment remained impaired (3/12).

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size	
VAP-F23R_DKW01B00 / Dickeys Swamp / Dogwoods Fork to Route 620	5A Escherichia coli (E. coli	1	2014	Н	4.33	
Dickeys Swamp		Estuary		ervoir	River (Miles)	
Recreation (Sq. Miles) (Acres) Escherichia coli (E. coli) - Total Impaired Size by Water Type:						

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-09-BAC Market Swamp

Cause Location: Market Swamp from the Walker Coleman Pond dam downstream to its mouth.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2014 cycle, Market Swamp below Walker Coleman Pond was impaired of the Recreation Use due to an E. coli

exceedance rate of 2/12 at station 8-MKT001.04, which is located at the Route 14 bridge.

Note: monitoring at station 8-MKT001.96 was acceptable (0/12).

The exceedance rate was 4/12 at 8-MKT001.04 during the 2020 cycle.

	Escherichia coli (E. coli) - To	al Impaired	Size by Water Type:				2.01
Recreation				(Sq. Miles)	(Ac	cres)	(Miles)
Market Swamp				Estuary		ervoir	River
VAP-F23R_MKT01B0 to mouth at Dickeys \$	00 / Market Swamp / Walker Coleman Po Swamp.	ond 5A	Escherichia coli (E. coli)	l.	2014	Н	2.01
Assessment Unit	/ Water Name / Location Desc.	Cause Catego	e ry Cause Name		First Listed	TMDL Dev. Priority	Water Size

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-10-BAC XJG - Dickeys Swamp, UT

Cause Location: Tributary XJG in its entirety.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2014 cycle, Dickeys Swamp UT XJG was considered impaired of the Recreation Use due to an E. coli exceedance

rate of 5/12 at 8-XJG000.08.

Cycle **TMDL** First Dev. Cause Water Priority Category Cause Name Listed Size Assessment Unit / Water Name / Location Desc. VAP-F23R_XJG01A14 / XJG - Dickeys Swamp, UT / Headwaters 5A Escherichia coli (E. coli) 2014 Н 1.99 to mouth

XJG - Dickeys Swamp, UT Estuary Reservoir River (Sq. Miles) (Acres) (Miles) Recreation

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.99

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-11-BAC Dogwood Fork

Cause Location: Dogwood Fork from its headwaters to its mouth at Dickeys Swamp

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2014 cycle, Dogwood Fork was impaired of the Recreation Use due to an E. coli exceedance rate of 4/12 at station

8-DWD000.77, which is located at the Route 621 bridge.

The exceedance rate was 3/12 in the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Caus Catego	e ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_DWD01A00 / Dogwood Fork / From its headwaters t its mouth at Dickeys Swamp.	to 5A	Escherichia coli (E. coli)	2014	Н	2.91

Dogwood Fork

Recreation

Estuary (Sq. Miles)

Reservoir (Miles)

River (Miles)

River (Miles)

2.91

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-12-BAC XDN - Garnetts Creek, UT

Cause Location: Headwaters to mouth at Garnetts Creek

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

Based on monitoring during the 2014 cycle, tributary XDN was impaired of the Recreation Use due to an E. coli exceedance rate of 2/11 at 8-XDN000.12, which is located at the Route 620 bridge.

Unfortunately, the impairment was inadvertently left off in the 2014 cycle. Although XDN was first listed in the 2016 cycle, the TMDL due date is 2026 to reflect the initial monitoring.

The exceedance rate was 5/9 during the 2020 cycle.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_XDN01A00 / XDN - Garnetts Creek, UT / Headwa to mouth at Garnetts Creek.	ters 5A Escherichia coli (E. coli		2016	Н	2.53
XDN - Garnetts Creek, UT Recreation		Estuary (Sq. Miles)		ervoir res)	River (Miles)
Escherichia coli (E. coli) - Tot	al Impaired Size by Water Type:				2.53

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-13-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from its headwaters downstream to the confluence with Dogwood Fork.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2020 cycle, Dickeys Swamp from its headwaters to the confluence with Dogwood Fork was impaired of the

Recreation Use due to an E. coli exceedance rate of 3/12 at 8-DKW005.73.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F23R_DKW01A00 / Dickeys Swamp / Headwaters to Dogwood Fork.	5A Escherichia coli (E. coli)		2020	Н	3.99
Dickeys Swamp Recreation		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Escherichia coli (E. coli) - To	tal Impaired Size by Water Type:				3.99

Sources:

Source Unknown

York River Basin

Cause Group Code: F23R-14-BAC Dickeys Swamp

Cause Location: Dickeys Swamp from Route 620 downstream to its mouth at Garnetts Creek.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2020 cycle, Dickeys Swamp from Route 620 to its mouth at Garnetts Creek was impaired of the Recreation Use due

to an E. coli exceedance rate of 4/23 at 8-DKW000.12.

Cycle **TMDL** First Dev. Cause Water Priority Category Cause Name Listed Size Assessment Unit / Water Name / Location Desc. VAP-F23R_DKW01C98 / Dickeys Swamp / Route 620 to mouth at 5A Escherichia coli (E. coli) 2020 L 0.07 **Garnetts Creek**

Dickeys Swamp

Recreation

Estuary (Sq. Miles)

Reservoir (Miles)

River (Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

0.07

Sources:

Source Unknown

York River Basin

Cause Group Code: F24E-02-BAC Mattaponi River

Cause Location: The Mattaponi River from Garnetts Creek to the tidal freshwater/oligohaline boundary at approximately river mile 18

City / County: King And Queen Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2018 cycle, the Mattaponi River from Garnetts Creek to the tidal freshwater/oligohaline boundary was impaired of the Recreation Use due to an E. coli exceedance rate of 4/35 at 8-MPN017.46.

The exceedance rate was 4/34 in the 2020 cycle.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
CAP-F24F MPN03A98 / Mattaponi River / Garnetts Creek to tidal 5A Escherichia coli (E. coli)
2018 L 1.384

VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tidal 5A Escherichia coli (E. coli) freshwater/oligohaline boundary at approximately river mile 18

MPNTF

Mattaponi RiverEstuaryReservoirRiverRecreation(Sq. Miles)(Acres)(Miles)

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 1.384

Sources:

Source Unknown

York River Basin

Cause Group Code: F24R-01-BAC Heartquake Creek

Cause Location: Heartquake Creek from the confluence with the UT at approx. rivermile 4.67 downstream to the tidal limit.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2012 cycle, the segment was impaired of the Recreation Use due to an E. coli exceedance rate of 2/12 at the Route 14 bridge (8-HTQ003.77).

The stream is located within the study area for the Upper York Shellfish TMDL, which was approved by the EPA on 7/28/2010; therefore, the impairment is considered nested (Category 4A).

Recreation		(Sq. Miles)	(Ac	res)	(Miles)
Heartquake Creek		Estuary	Res	ervoir	River
VAP-F24R_HTQ01A00 / Heartquake Creek / From the confl with the UT at approx. rivermile 4.67 downstream to the tidal lin			2012	L	2.27
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Escherichia coli (E. coli) - Total Impaired Size by Water Type:

2.27

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F24R-03-BAC Courthouse Creek

Cause Location: Courthouse Creek from King and Queen Courthouse Pond to the tidal limit

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 5A

During the 2016 cycle, Courthouse Creek downstream of King and Queen Courthouse Pond was impaired of the Recreation

Cycle TMDL

Use due to an E. coli exceedance rate of 3/12 at 8-CTH001.96, which is located at the Route 14 bridge.

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAP-F24R_CTH01A00 / Courthouse Creek / From King and Queen Courthouse Pond downstream to the tidal limit.	5A Escherichia coli (E. coli)		2016	Н	0.72
Courthouse Creek		Estuary		ervoir	River
Recreation		(Sq. Miles)	(Ac	res)	(Miles)
Escherichia coli (E. coli) - Tota	al Impaired Size by Water Type:				0.72

Sources:

Source Unknown

York River Basin

Cause Group Code: F24R-03-DO **Courthouse Creek**

Cause Location: Courthouse Creek from King and Queen Courthouse Pond to the tidal limit

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5A

During the 2014 cycle, Courthouse Creek downstream of King and Queen Courthouse Pond was impaired of the Aquatic Life

Use due to dissolved oxygen exceedances at 8-CTH001.96, which is located at the Route 14 bridge.

The exceedance rate was 4/24 during the 2016 cycle.

Cycle **TMDL** First Dev. Cause Water Listed Priority Assessment Unit / Water Name / Location Desc. Category Cause Name Size Dissolved Oxygen 2014 0.72 VAP-F24R_CTH01A00 / Courthouse Creek / From King and Queen Courthouse Pond downstream to the tidal limit.

Courthouse Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Aquatic Life**

0.72

Dissolved Oxygen - Total Impaired Size by Water Type:

Sources:

Dam or Impoundment Natural Conditions - Water

Quality Standards Use Attainability Analyses

Needed

Source Unknown

York River Basin

Cause Group Code: F25E-01-BAC Mattaponi River

Cause Location: The Mattaponi River from Heartquake Creek downstream to its mouth.

City / County: King And Queen Co. King William Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

The Mattaponi from Heartquake Creek downstream to its mouth was assessed as not supporting the Recreation Use based on enterococci exceedances at 8-MPN004.39 during the 2006 cycle.

The TMDL was approved by the EPA on 7/28/2010; therefore, the segment is Category 4A.

During the 2020 cycle, enterococci exceedance rates were 20/69 at 8-MPN004.39 and 5/12 at 8-MPN006.23. The exceedance rate at 8-MPN000.98 was acceptable (0/10).

Enterococcus - Total In	mpaired Size by Water Type:	2.525			
Mattaponi River Recreation		Estuary (Sq. Miles)	Rese (Acı		River (Miles)
YRKMH					
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 8/15/2018 within Mattaponi River mainsten	4A Enterococcus m.	20	006	L	0.641
YRKMH					
MPNOH VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004F, 8/15/2018.	4A Enterococcus	20	006	L	0.209
MPNOH VAP-F25E_MPN05B06 / Mattaponi River / From VDH-SFC 049-004B, 8/15/2018 to the oligohaline/York mesohaline boundary.	4A Enterococcus	20	006	L	0.384
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004G, 8/15/2018	4A Enterococcus	20	006	L	1.292
Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	F	ycle irst sted	TMDL Dev. Priority	Water Size

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F25R-01-BAC Tastine Swamp and Little Tastine Swamp

Cause Location: From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbins Pond.

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Tastine Swamp from the Route 611 bridge downstream to Corbins Pond was initially assessed in 1998 as fully supporting but threatened of the Recreation use goal.

During the year 2002 cycle the segment was downgraded and extended to incorporate Little Tastine Swamp.

In the 2004 cycle, the segment continued to be impaired based on fecal coliform exceedances at 8-TST001.81 (Route 611 bridge).

E. coli monitoring was conducted during the 2010 cycle. Although the exceedance rate was acceptable at the original listing station (1/12 at 8-TST001.81), impairment was noted at two new stations (3/12 at 8-LTS001.65 and 2/12 at 8-TST001.35). The impairment converted to E. coli but the original TMDL due date was maintained.

The stream is located within the study area for the tidal Lower Mattaponi River Bacterial TMDL, which was approved by the EPA on 7/28/2010. Implementation of the enterococci TMDL is expected to bring the riverine E. coli impairment into compliance; therefore, the impairment was considered nested (Category 4A) in the 2012 cycle.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name	First	Dev.	Water
	Listed	Priority	Size
VAP-F25R_TST01A98 / Tastine Swamp, Little Tastine Swamp / 4A Escherichia coli (E. coli) From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbin Pond	2010	L	6.25

Tastine Swamp and Little Tastine Swamp		Estuary	Reservoir	River
Recreation		(Sq. Miles)	(Acres)	(Miles)
	–			

Escherichia coli (E. coli) - Total Impaired Size by Water Type: 6.25

Cycle TMDI

Sources:

Municipal Point Source Non-Point Source Discharges

York River Basin

Cause Group Code: F25R-01-DO Tastine Swamp and Little Tastine Swamp

Cause Location: From the headwaters of Little Tastine Swamp down Tastine Swamp to Corbins Pond.

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

During the 2016 cycle, the segment was impaired of the Aquatic Life Use due to a dissolved oxygen exceedance rate of 2/12 at

8-TST001.81 (Rt. 611 bridge.)

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

AP-F25R TST01A98 / Tastine Swamp, Little Tastine Swamp / 5C Dissolved Oxygen 2016 L 6.25

VAP-F25R_TST01A98 / Tastine Swamp, Little Tastine Swamp / From the headwaters of Little Tastine Swamp down Tastine Swamp

to Corbin Pond

Tastine Swamp and Little Tastine Swamp

Reservoir River

Aquatic Life

(Sq. Miles) (Acres) (Miles)

Dissolved Oxygen - Total Impaired Size by Water Type: 6.25

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F25R-02-DO Tastine Swamp

Cause Location: From the headwaters of Tastine Swamp downstream to the confluence with Little Tastine Swamp

City / County: King And Queen Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 5C

Tastine Swamp from its headwaters down to the confluence with Little Tastine Swamp was assessed as not supporting of the Aquatic Life Use in the 2010 cycle due to a dissolved oxygen exceedance rate of 2/12 at station 8-TST003.16.

Cycle TMDL

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAP-F25R_TST01B10 / Tastine Swamp / Headwaters to confluence with Little Tastine Swamp	5C Dissolved Oxygen		2010	L	2.15
Tastine Swamp Aquatic Life		Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Dissolved Oxygen - To	otal Impaired Size by Water Type:				2.15

Sources:

Natural Conditions - Water Quality Standards Use Attainability Analyses Needed

York River Basin

Cause Group Code: F25R-03-BAC XIN - Tastine Swamp, UT

Cause Location: From the headwaters downstream to the mouth at Tastine Swamp

City / County: King And Queen Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

During the 2010 cycle, the tributary was assessed as not supporting of the Recreation Use due to an E. coli violation rate of 3/12 at station 8-XIN001.00.

The stream is located within the study area for the tidal Lower Mattaponi River Bacterial TMDL, which was approved by the EPA on 7/28/2010 and by the SWCB on 12/13/2010. Implementation of the enterococci TMDL is expected to bring the riverine E. coli impairment into compliance; therefore, the impairment was considered nested during the 2012 cycle (Category 4A.)

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F25R_XIN01A10 / XIN - Tastine Swamp, UT / Heamouth at Tastine Swamp	adwaters to 4A Escherichia coli (E. coli)		2010	L	2.40
XIN - Tastine Swamp, UT		Estuary (Sq. Miles)		ervoir res)	River (Miles)
	li) - Total Impaired Size by Water Type:	,	`	,	2.40

Sources:

Municipal Point Source Discharges Non-Point Source

York River Basin

Cause Group Code: F26E-01-PCB York River, Queens Creek, Kings Creek, Wormley

Cause Location: This cause encompasses the area from the confluence of the Mattaponi and Pamunkey Rivers down to the mouth

of the York River including King, Queens and Wormley Creek

City / County: Gloucester Co. James City Co. King And Queen Co. King William Co. New Kent Co.

Williamsburg City York Co.

Use(s): Fish Consumption

Cause(s) / VA Category: PCBs in Fish Tissue / 5A

The segment is included under a 12/13/2004 VDH Fish Consumption Advisory due to polychlorinated biphenyls (PCBs) in fish tissue. The advisory recommends that adults eat no more than two meals/month of croaker, gizzard shad, and spot. High risk individual

	Caus		Cycle First	TMDL Dev.	Water
Assessment Unit / Water Name / Location Desc.	atego	ory Cause Name	Listed	Priority	Size
VAT-F26E_QEN01A02 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.296
Split in 2012 cycle.					
VAT-F26E_QEN01B12 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.136
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20180815). CBP segment YRKMH.		PCBs in Fish Tissue	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 8/15/2018), approx. Goff Point . CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 8/15/2018. CB Seg - YRKMH.	5A -	PCBs in Fish Tissue	2006	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20180815	5A	PCBs in Fish Tissue	2006	L	0.042
YRKMH					
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 8/3/2015 . CBP segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.457
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	5A	PCBs in Fish Tissue	2006	L	2.680
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20180815.	5A	PCBs in Fish Tissue	2006	L	2.125

York River Basin					
CBP segment YRKMH.					
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	5A	PCBs in Fish Tissue	2006	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004, 20180815. CB segment YRKMH.	5A	PCBs in Fish Tissue	2006	L	0.023
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.128
Shortened in 2012 cycle.					
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2002	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.072
Shortened in 2012 cycle.					
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	5A	PCBs in Fish Tissue	2002	L	0.283
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	5A	PCBs in Fish Tissue	2006	L	10.393
YRKPH					
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20180814) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	PCBs in Fish Tissue	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	5A	PCBs in Fish Tissue	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-027 (effective 20120808).	5A	PCBs in Fish Tissue	2006	L	0.018

York River Basin							
VAT-F27E_YRK02A00 / York River - Lower line across river from Roosevelt Pond to Mum downstream to mouth (RM 0.0) near Thorough segment YRKPH. No DSS shellfish condemnation	fort Islands (RM 7.49), nfare Creek. CBP	5A	PCBs in Fish Tissue		2006	L	11.657
VAT-F27E_YRK02B00 / York R - DSS Admin STP/Amoco / Described in VDH-DSS (ADMI) condemnation 052-006 B&C (effective 201805 Cr., HRSD STP & power plant and refinery. Co	NISTRATIVE) shellfish 503) adjacent Wormley	5A	PCBs in Fish Tissue		2006	L	0.508
VAT-F27E_YRK02C00 / York River - DSS At to USCG / Segment on Yorktown side (south (ADMINISTRATIVE) shellfish condemnation # 2018-05-03) (portion in York R), from Wormle S shore to mid-channel. CBP segment YRKPI	shore) of river. DSS 052-006 A (effective y Cr. to USCG Station,	5A	PCBs in Fish Tissue		2006	L	2.698
VAT-F27E_YRK02D12 / York River - Lower within VDH-DSS seasonal condemnation 046 CBP segment YRKPH.		5A	PCBs in Fish Tissue		2006	L	0.139
York River, Queens Creek, Kings Creek, Wo	ormley			Estuary (Sq. Miles)	Reser (Acre		River (Miles)
Fish Consumption PCBs i	n Fish Tissue - Total Impa	airec	Size by Water Type:	57.844	•	,	(50)
	•		• • • • • • • • • • • • • • • • • • • •				

Sources:

Source Unknown

York River Basin

Cause Group Code: F26E-03-BAC Queens Creek

Cause Location: This cause encompasses the entirety of Queens Creek to the end of VHD shellfish condemnation 051-035 on the

southern shore of the York River.

City / County: Williamsburg City York Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

Queens Creek was initially assessed as impaired of the Recreation Use in the 2002 cycle. The impairment is based on data collected at station 8-QEN002.47. The exceedance rate is 6/32. The Recreation Use impairment is located within the study

area for the Shellfish TMDL completed April 17, 2008; therefore it will be considered nested in 2012.

NESTED: 34372, 4/17/2008 2006 00328 / 2008 F26E-03-BAC

Assessment Unit / Water Name / Location D	Cause Desc. Categor	y Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_QEN01A02 / Queens Creek / South s south of Camp Peary Naval Reservation. From end (below dam at Waller Mill Res.) downstream to end condemnation # 051-035 A, 8/14/2018. CBP segme	of tidal waters of DSS shellfish	Enterococcus		2002	L	0.296
Split in 2012 cycle.						
VAT-F26E_QEN01B12 / Queens Creek / South s south of Camp Peary Naval Reservation. From end condemnation # 051-035 (20180814). downstream segment YRKMH.	of DSS shellfish	Enterococcus		2002	L	0.136
Queens Creek			Estuary	Rese	ervoir	River
Recreation			(Sq. Miles)	(Ac	res)	(Miles)
Entero	coccus - Total Impaired	Size by Water Type:	0.432			

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4) Non-Point Source

York River Basin

Cause Group Code: F26E-06-SF Fox Creek

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation #047-072 A,7/22/2016.

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 5B

The Shellfishing Use is impaired based on the VDH-DSS condemnation 047-072A (20160722).

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. 5B Fecal Coliform Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072 A (effective 20160722).

Fox Creek

Shellfishing

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.016

2006

0.016

Sources:

Source Unknown

York River Basin

Cause Group Code: F26E-10-SF Carter Creek

Cause Location: Described in VDH Notice and Description of Shellfish Direct Harvesting Condemnation # 050-079A, 7/24/2015.

City / County: York Co. Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 5B

Portion of VDH-DSS condemnation 050-079A (20150724)

Carter Creek has been impaired since the 2004 cycle due to a VDH condemnation. During the 2012 cycle, the condemnation

extends into a portion of the York River.

2006 70004 / 2008 F26E-10-SF

Assessment Unit / Water Name / Location Desc.

Cause
Category Cause Name
5B Fecal Coliform

Listed Priority
2004 L

Cycle First **TMDL**

Dev. Water Priority Size

0.025

VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-

087 B, 20180807.

Carter Creek

Shellfishing

Estuary Reservoir River (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.025

Sources:

Source Unknown

York River Basin

Cause Group Code: F26E-12-SF Adams Creek-Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 048-128 B (effective 7/26/2016).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired based on the VDH-DSS condemnation 048-128B, 7/26/2016. A portion of Adams Creek was listed on the 1998 303(d) list due to VDH condemnation 198B. The condemnation expanded and, during the 2010 cycle, the condemnation extended to the mouth of the creek (#048-128B, 7/6/2005). The TMDL was approved by the EPA on 6/9/2009 for most of the Creek (from upstream end of tidal waters to downstream last Unnamed Trib). During the 2014 cycle, the condemnation shrank. The open area within the TMDL study area will be partially delisted (Category 2C) and added to AU VAT-F26E_ADM01B12, the condemned area will be considered Category 4A.

Cycle
Cause
Cause
First
Category Cause Name
Listed

VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128 B (effective 8/07/2018).

Adams Creek-Upper Estuary Reservoir River
Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.116

Fecal Coliform

TMDL

Dev.

Priority

L

1998

Water

Size

0.116

Sources:

Non-Point Source

York River Basin

Cause Group Code: F26E-14-SF Poropotank River

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 048-128A, 7/26/2016.

City / County: Gloucester Co. King And Queen Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired based on the VDH-DSS condemnation 048-128A, 7/26/2016. A portion of Poropotank Creek was listed on the 1998 303(d) list due to VDH condemnation 198A. The condemnation expanded and during the 2010 cycle, the condemnation extended to the mouth of the creek (#048-128A, 7/6/2005) (see 2010 fact sheet F26E-28-SF). However, the TMDL addressed the 1998 impaired area only. The TMDL was approved by the EPA on 6/9/2009. During the 2012 cycle, the condemnation shrank and is now smaller than the 1998 impairment. The downstream area will be partially delisted (Category 2A), the open area within the TMDL study area will be partially delisted (Category 2C), the condemned area is considered Category 4A.

	Cause	Cycle First	IMDL Dev.	Water
Assessment Unit / Water Name / Location Desc.	Category Cause Name		Priority	
VAT-F26E PTK01A00 / Poropotank River / North shore of York	4A Fecal Coliform	1998	L	0.451

VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 8/07/2018. CBP segment YRKMH.

Poropotank River
Shellfishing
Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.451

Sources:

Non-Point Source

York River Basin

Cause Group Code: F26E-15-SF Aberdeen Creek - Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078 A (8/4/2015).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired for a portion of Aberdeen Creek and has been impaired since the 1998 cycle due to VDH shellfish condemnation 047-078. The condemnation has since expanded and is currently included under 047-078A (20150804). However, the TMDL "York River: Gloucester Point to Jones Creek", which was approved by the EPA on 7/30/2007, only addressed the 1998 portion. The original condemned area will be considered Category 4A. In 2014, the downstream expansion (F26E-02-SF) will be Nested and now included with this CGC and AU. New nesting rules for 2014 allow nesting within the tidal range as long as newly impaired segments are comparable and all existing sources are accounted for in the TMDL. NESTED 2014: 33102, 7/30/2007 from VAT-F26E_ABD02A12 from 2012.

	Cause		First	Dev.	Water	
Assessment Unit / Water Name / Location Desc.	Catego	ry Cause Name	Listed	Priority	Size	
/AT-F26E ABD01A00 / Aberdeen Creek - Upper / Southeast of	4A	Fecal Coliform	1998	L	0.094	

VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Conditionally Approved area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 8/15/2018).

Aberdeen Creek - Upper Estuary Reservoir River
Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.094

Cvcle

TMDL

Sources:

Non-Point Source

York River Basin

Cause Group Code: F26E-16-SF Queens Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 051-035 A,7/16/2010.

City / County: Williamsburg City York Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired for Queens Creek. Queens Creek was impaired of the Shellfish Use in the 1998 cycle. The TMDL was developed to address the impairment and was approved by the EPA on 4/17/2008. However, the condemnation has subsequently shortened and is currently addressed in VDH condemnation #051-035A, 7/16/2010. The open downstream area was partially delisted (Category 2C); the condemned area remains Category 4A.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Fecal Coliform

Cycle TMDL First Dev. Water Listed Priority Size

0.296

1998

VAT-F26E_QEN01A02 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH.

Split in 2012 cycle.

Queens Creek

Shellfishing

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.296

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4) Non-Point Source

York River Basin

Cause Group Code: F26E-17-SF Skimino Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-087 A (effective 20150724).

City / County: James City Co. York Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present 050-087A, 7/24/2015. The TMDL for Chesapeake Bay Shellfish Waters: Ware Creek, Taskinas Creek, and Skimino Creek Bacterial Impairments in York, James City, and New Kent Counties, VA, for growing area 50 - Condemnations 073 and 087 was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Skimino Creek will be considered Category 4A.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
AT-F26F SKM01A00 / Skimino Creek / North of Skimino Farms. 4A Fecal Coliform
1998 L 0.174

VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20180807).

Skimino Creek

Estuary Reservoir River

Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.174

Sources:

Non-Point Source

York River Basin

Cause Group Code: F26E-18-SF **Taskinas Creek**

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-073 B (effective 20160728).

City / County: James City Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present 050-073B, 7/28/2016. The TMDL was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Taskinas Creek will

be considered Category 4A.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Fecal Coliform

Listed

Reservoir

(Acres)

Cycle

1998

First Dev. Water **Priority** Size

0.026

River

(Miles)

TMDL

VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20180807).

Taskinas Creek Estuary (Sq. Miles)

> Fecal Coliform - Total Impaired Size by Water Type: 0.026

Sources:

Shellfishing

Non-Point Source

York River Basin

Cause Group Code: F26E-19-SF Ware Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 050-073 A (effective 20160728).

City / County: James City Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present, 050-073A, 7/28/2016. The TMDL was completed during the 2012 cycle and was approved by the EPA on 3/25/2010. Ware Creek will be considered Category 4A.

Cause Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of 4A_Fecal Coliform 1998 L 0.133

Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20180807).

Ware Creek
Shellfishing
Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.133

Sources:

Non-Point Source

York River Basin

Cause Group Code: F26E-20-SF Baker Creek, Philbates Creek, York River at Hockley & Unsegmented SF

Condemned in F26E

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004 A (20120621) as well as the

southern portion of VDH condemnation 049-004 A (20150803)

City / County: King And Queen Co. New Kent Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired based on the DSS condemnation #049-009A, effective 20150803.

Included in TMDL for Bacteria for the Upper York River EPA approved 7/28/2010. TMDL #1 for SF Condemnations in the York R Mainstem, unsegmented estuaries in F26, Philbates, Baker, Baker, Ferry, Hockley and Robinson Creeks are included.

Fecal Coliform - Total In	npaired	Size by Water Type	0.046			
Baker Creek, Philbates Creek, York River at Hockley & Unsegment F26E Shellfishing	ted SF	Condemned in	Estuary (Sq. Miles)		ervoir eres)	River (Miles)
/AT-F26E_YRK01C12 / York River-at Hockley Cr / York River legment at mouth of Hockley Cr within VDH DSS Condemnation 049 104 C, 8/15/2018. CB Seg - /RKMH.	4A)-	Fecal Coliform		2002	L	0.029
/AT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004 (20180815)	4A <	Fecal Coliform		2008	L	0.017
Assessment Unit / Water Name / Location Desc.	Cause Categor	y Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

Sources:

Municipal Point Source Non-Point Source Source Unknown

Discharges

York River Basin

Cause Group Code: F26E-22-SF Hockley Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004 C (effective 8/03/2015).

Northern portion of condemnation area.

City / County: King And Queen Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Shellfish Use is impaired based on DSS Condemnation 049-004 C effective 8/3/2015.

The impairment was addressed in the report "Bacteria Total Maximum Daily Load (TMDL) Development for the Upper York River, the Lower Pamunkey River, and the Lower Mattaponi River (Tidal) Watersheds" which was completed during the 2012 and was approved by the ERA on 7/39/2010.

cycle and was approved by the EPA on 7/28/2010.

Cycle **TMDL** First Dev. Cause Water Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW Fecal Coliform 2002 L 0.055

of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004 C (effective 8/15/2018).

Hockley Creek
Shellfishing
Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.055

Sources:

Municipal Point Source

Discharges

Non-Point Source

York River Basin

Cause Group Code: F26E-29-SF York River

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 049-004 A ,8/3/2015. This is the only

portion of the condemnation that is not administrative.

City / County: King And Queen Co. King William Co. New Kent Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired based on new VDH Restricted Condemnation apart of Admin Condemn 049-004 A effective date 8/3/2015. Included in the report "Bacteria Total Maximum Daily Load (TMDL) Development for the Upper York River, the Lower Pamunkey River, and the Lower Mattaponi River (Tidal) Watersheds" which was completed during the 2012 cycle and was approved by the EPA on 7/28/2010.

Cycle TMDL
Cause
First Dev. Water
Assessment Unit / Water Name / Location Desc.

Category Cause Name

VAT-F26E YRK01E14 / York River / York River from Goff Point

4A Fecal Coliform

2014 L
0.457

VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 8/3/2015 . CBP segment YRKMH.

York River

Estuary Reservoir River

Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.457

Sources:

Source Unknown

York River Basin

Cause Group Code: F26R-01-BAC **Carter Creek**

Cause Location: This cause encompasses Carter Creek from the tidal limit upstream to the confluence with an unnamed tributary.

City / County: York Co. Use(s): Recreation

Cause(s) / VA Category: Fecal Coliform / 5A

Carter Creek is impaired of the Recreation Use due to fecal coliform exceedances at 8-CTC003.78. The exceedance rate was

2/3 during the 2006 cycle. No additional monitoring has been conducted.

Cycle **TMDL** First Dev. Cause Water Listed Priority Size Assessment Unit / Water Name / Location Desc. Category Cause Name 2004 L Fecal Coliform 3.38

VAT-F26R_CTC01A04 / Carter Creek / NW & SE of Skimino, N of 5A Camp Peary area. Riverine portion of Carter Creek, extends

upstream to branches SW of Skimino area.

Carter Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) Recreation 3.38

Fecal Coliform - Total Impaired Size by Water Type:

Sources:

Source Unknown

York River Basin

Cause Group Code: F26R-01-BEN Carter Creek

Cause Location: This cause encompasses Carter Creek from the tidal limit upstream to the confluence with an unnamed tributary.

City / County: York Co. Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

Benthic biological monitoring previously conducted at station 8-CTC003.78 (located at State Route 604) indicated the stream's benthic community was moderately impaired (Benthic MI: 1999, SI S&F 2000, MI F 2001]. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use. Impairment retained as no more recent data available since 2001.

Assessment Unit / Water Name / Location Desc.	Caus Catego	e ory Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_CTC01A04 / Carter Creek / NW & SE of Skimino Camp Peary area. Riverine portion of Carter Creek, extends upstream to branches SW of Skimino area.	, N of 5A	Benthic Macroinvertebra Bioassessments	ates	2004	L	3.38
Carter Creek Aquatic Life			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - To	tal Impaire	d Size by Water Type:				3.38

Sources:

Source Unknown

York River Basin

Cause Group Code: F26R-02-BEN XEA - Bland Creek, UT

Cause Location: This cause encompasses the tributary XEA from its headwater to its mouth at Bland Creek.

City / County: Gloucester Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

The Aquatic life use is not supporting based on benthic population diversity and abundance measures at this Freshwater Probabilistic Monitoring (FPM) station. The Aquatic Life Use is not supporting based on benthic population diversity and abundance measures at this Freshwater Probabilistic Monitoring (FPM) station, IM-carried forward as no data in cycle. The Aquatic Life Use is not supported based on the benthic data collected in 2001 (Benthic ProbMon-Benthic IM [MI: S&F-01]. Benthic biological monitoring at station 8-XEA000.12 (FPM) indicated the stream's benthic community was moderately impaired. As a result, DEQ's General Standard (VR680-21-01.2) is not met for the protection of benthic aquatic life and this segment is assessed as not supporting of the Clean Water Act's Aquatic Life Use.

Cycle TMDL

Assessment Unit / Water Name / Location Desc.	Cause e / Location Desc. Category Cause Name			First Listed	Dev. Priority	Water Size
VAT-F26R_XEA01A08 / Unnamed Tributary to Bland Creek / Located northwest of Sassafras area, in Gloucester County. From headwaters downstream to confluence with Bland Creek. Downstream (west) of Rt. 606 7 Rt 615, NE of Stubbs Pond	5A	Benthic Macroinvertebra Bioassessments	tes	2008 L		1.23
XEA - Bland Creek, UT Aquatic Life			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Benthic Macroinvertebrates Bioassessments - Total	Impaire	d Size by Water Type:				1.23

Sources:

Source Unknown

York River Basin

Cause Group Code: F26R-04-BEN Bird Creek

Cause Location: This cause encompasses Bird Creek from its headwater to its mouth at Ware Creek.

City / County: James City Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Benthic Macroinvertebrates Bioassessments / 5A

During the 2012 cycle, Byrd Creek was impaired of the Aquatic Use due to a slightly impaired benthic community at freshwater probabilistic monitoring station 8-BRD000.43.

	use egory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26R_BRD01A12 / Bird Swamp / Headwaters to mouth at Ware Creek	A Benthic Macroinvertebrates Bioassessments	2012	L	2.47
Bird Creek	Estuary		ervoir	River
Aquatic Life	(Sq. Miles)	(Ad	res)	(Miles)
Benthic Macroinvertebrates Bioassessments - Total Impa	ired Size by Water Type:			2.47

Sources:

Source Unknown

York River Basin

Cause Group Code: F26R-05-BAC France Swamp

Cause Location: This cause encompasses the Trib to Ware Creek. NW of Croaker, NE of Toano.

City / County: James City Co.

Use(s): Recreation

Cause(s) / VA Category: Escherichia coli (E. coli) / 4A

Recreation Use is not supporting based on E.coli data at station 8-FRS001.17, with 4 viol/ 22 obs. Previously was supporting with 0 viol/ 11 obs. In 2018 nested new recreation use impairment in EPA approved Ware, Taskinas and Skimino Creeks Fecal Coliform TMDL. New impairment is contained in TMDL watershed with similar land uses. Reductions in the TMDL apply to entire TMDL and are adequate.

	Escherichia coli (E. coli) - T	otal Impaired Size by Water Type:				4.53
Recreation			(Sq. Miles)	(Ac	res)	(Miles)
France Swamp			Estuary		ervoir	River
VAT-F26R_FRS01A00 of Croaker, NE of Toan	/ France Swamp / Trib to Ware Cree o.	c. NW 4A Escherichia coli (E. coli	1	2018	L	4.53
Assessment Unit /	Water Name / Location Desc.	Cause Category Cause Name		First Listed	Dev. Priority	Water Size

Sources:

Non-Point Source

York River Basin

Cause Group Code: F27E-05-BAC King Creek

Cause Location: This cause encompasses all of King Creek, at South shore of York River. East of Pennimon Spit, within Naval

Weapons Station facility.

City / County: York Co. Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 4A

King Creek from the tidal limit to its mouth is impaired of the Recreation Use due to an enterococci violation rate of 12/29 at 8-KNG004.46. The Recreation Use is nested within the Shellfish Use TMDL, EPA approved 4/8/2008.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of You River. East of Pennimon Spit, within Naval Weapons Station facility From end of tidal waters downstream to end of DSS condemnation 051-035C, 8/14/2018. CBP segment YRKPH.		Enterococcus		1998	L	0.128
Shortened in 2012 cycle.						
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of You River. East of Pennimon Spit, within Naval Weapons Station facility From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.		Enterococcus		1998	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of You River. East of Pennimon Spit, within Naval Weapons Station facility From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH.		Enterococcus		1998	L	0.072
Shortened in 2012 cycle.						
King Creek Recreation			Estuary (Sq. Miles)		ervoir cres)	River (Miles)
Enterococcus - Total I	mpaired	d Size by Water Type:	0.420	`		(50)

Sources:

Discharges from Municipal Separate Storm Sewer Systems (MS4) Non-Point Source

York River Basin

Cause Group Code: F27E-06-BAC York River - Yorktown Beach

Cause Location: This cause encompasses Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish direct

harvesting condemnation.

City / County: York Co. Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

Enterococcus is impaired based on a monthly geometric mean violation in 2013 as well as multiple swimming advisories.

Enterococcus data at VDHB station VA482894 had 2 geometric mean viol/ 20 obs.

Cycle TMDL
Cause First Dev. Water
Assessment Unit / Water Name / Location Desc. Category Cause Name Listed Priority Size

5A

Enterococcus

2016

0.024

VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish

direct harvesting condemnation.

York River - Yorktown Beach
Recreation
Reservoir River
(Sq. Miles)
(Acres)
(Miles)

Enterococcus - Total Impaired Size by Water Type: 0.024

Sources:

Source Unknown

York River Basin

Cause Group Code: F27E-07-BAC York River - Gloucester Point Beach

Cause Location: This cause encompasses Gloucester Point Beach VDH bathing area. CBP segment YRKPH.

City / County: Gloucester Co.

Use(s): Recreation

Cause(s) / VA Category: Enterococcus / 5A

Enterococcus is impaired based on a monthly geometric mean violation at VDH Beach Program station VA714367 as well as

multiple swimming advisories. Enterococcus data collected at station VA714367 had 1 viol/ 20 obs.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Enterococcus

Cycle **TMDL** First Dev. Water Listed Priority Size L

VAT-F27E YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-027 (effective 20120808).

York River - Gloucester Point Beach

Estuary

Reservoir

2016

River

0.018

Recreation

(Sq. Miles)

(Acres)

(Miles)

Enterococcus - Total Impaired Size by Water Type:

0.018

Sources:

Source Unknown

York River Basin

Cause Group Code: F27E-13-SF King Creek - Upper

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 051-035C, 7/16/2010.

City / County: York Co. Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired based on VDH-DSS Condemnation 051-035C, 7/16/2010. King Creek was impaired in the 1998 cycle due to a VDH-DSS condemnation. The TMDL was approved by the EPA on 4/17/2008 and addressed King Creek to the mouth at the York River. During the 2012 cycle, the condemnation shortened. The condemned area remains Category 4A; the open downstream area will be Category 2C.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
CAT-F27F KNG01A02 / King Creek - Upper / South shore of York 4A Fecal Coliform
1998 L 0.128

VAT-F27E_KNG01A02 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to end of DSS condemnation # 051-035C, 8/14/2018. CBP segment YRKPH.

Shortened in 2012 cycle.

Systems (MS4)

King Creek - Upper Estuary Reservoir River
Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.128

Sources:

Discharges from Municipal Non-Point Source Separate Storm Sewer

York River Basin

Cause Group Code: F27E-15-SF Northwest & Northeast Branch Sarah Creek

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 046-052 A, C,E, M1 as well as the

non-administratively condemned region of 046-052 B (effective 20161011).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired for a portion of VDH-DSS condemnation 046-052 Seasonal M1 and Restricted A, C,E 10/11/2016.

Sarah Creek was impaired of the Shellfish Use in the 1998 cycle. The TMDL for Sarah Creek from Tidemill Road downstream to the extent of the 1998 impairment was approved by the EPA on 6/4/2006. The condemned areas will be considered

Category 4A.

Cause Assessment Unit / Water Name / Location Desc. Cause Category Cause Name		First Listed	Dev. Priority	Water Size
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / 4A Fecal Coliform North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20180906.		1998	L	0.029
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS condemnation # 046-052 M1, A, C and E (effective 20180906). CBP segment YRKPH.		1998	L	0.193
Northwest & Northeast Branch Sarah Creek Shellfishing	Estuary (Sq. Miles)		ervoir res)	River (Miles)
Fecal Coliform - Total Impaired Size by Water Type:	0.222			

Sources:

Non-Point Source

York River Basin

Cause Group Code: F27E-16-SF Timberneck Creek - Upper [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number # 047-003 A (effective 7/22/2016).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present, 047-003A 7/22/2016. Covered under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

Cycle **TMDL** Cause

Assessment Unit / Water Name / Location Desc.

Category Cause Name

Fecal Coliform

First Dev. Water Listed Priority Size

VAT-F27E TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of DSS shellfish direct harvesting condemnation # 047-003 A (effective 20170725). Portion of CBP segment YRKPH.

Timberneck Creek - Upper [TMDL-bact]

Estuary (Sq. Miles) Reservoir (Acres)

1998

River

0.139

Fecal Coliform - Total Impaired Size by Water Type:

0.139

(Miles)

Sources:

Shellfishing

Non-Point Source

York River Basin

Cause Group Code: F27E-17-SF Cedarbush Creek - Upper [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078 C (effective 20150804).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfishing Use is impaired due to the DSS shellfish direct harvesting condemnation which is present, 047-078C (20150804). Covered under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

Assessment Unit / Water Name / Location Desc.

Cause Category Cause Name

Fecal Coliform

Cycle **TMDL** First Dev. Water Listed **Priority** Size

1998

Estuary

(Sq. Miles)

VAT-F27E_CDB01A00 / Cedarbush Creek - Upper [TMDL-bact] / North shore York River, NW of Catlett Islands. From the end of tidal waters downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH. DSS shellfish direct harvesting condemnation # 047-078 C (effective 20180815).

Cedarbush Creek - Upper [TMDL-bact]

Reservoir

(Acres)

River (Miles)

0.078

Fecal Coliform - Total Impaired Size by Water Type: 0.078

Sources:

Shellfishing

Non-Point Source

York River Basin

Cause Group Code: F27E-18-SF Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact]

Cause Location: Described in VDH Notice and Description of Shellfish Condemnation Number 047-078B (20150804).

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The shellfish use is impaired for Carter Creek. Carter Creek has been impaired since the 1998 cycle due to VDH-DSS condemnations. The impairment was addressed in the TMDL "York River: Gloucester Point to Jones Creek VAT-F26E-13, 15-18, which was approved by the EPA on 7/30/2007.

Cycle TMDL
Cause
Cause
First Dev. Water
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Listed Priority Size
AT-F27F CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portion 4A Fecal Coliform
1998 L 0.180

VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact] / North shore York River, north of Catlett Islands. From the end of tidal waters downstream to the end of DSS condemnation 047-078B, 20180815 . Portion of CBP segment YRKPH.

Split in 2012 cycle

Carter Cr. (Gloucester Co.) - Upper portion [TMDL-bact]

Shellfishing

Reservoir River (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.180

Sources:

Non-Point Source

York River Basin

Cause Group Code: F27E-28-SF Jones Creek

Cause Location: Described in the VDH Notice and Description of Shellfish Condemnation number 047-072 B (20160722)

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Shellfish Use is impaired based on the Restricted VDH-DSS Condemnation # 047-072B, effective date 20160722). Covered

under TMDL "York River: Gloucester Point to Jones Creek" VAT-F26E-13, 15-18, EPA approved 7/30/2007.

Cycle **TMDL** First Dev. Cause Water Category Cause Name Listed Priority Assessment Unit / Water Name / Location Desc. Size Fecal Coliform 2002 0.051

VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between 4A Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective

20180815).

Jones Creek **Estuary** Reservoir River (Sq. Miles) (Acres) (Miles) **Shellfishing**

> Fecal Coliform - Total Impaired Size by Water Type: 0.051

Sources:

Source Unknown

York River Basin

Cause Group Code: F27E-29-SF Perrin River - Upper

Cause Location: Described in the VDH Notice and Description of Shellfish Condemnation number 046-081 A (20150804)

City / County: Gloucester Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

Shellfish Use is impaired for Upper Perrin River based on Restricted Condemnation for Shellfish Use based on VDH-DSS

condemnation #046-081A (effective date 20150804).

Cycle TMDL
Cause
Cause
First Dev. Water
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Listed Priority Size
AT-F27E PRN01A00 / Perrin River - Upper / North shore York
4A Fecal Coliform
2002 L 0.052

VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation

046-081A (effective 20180906). CBP segment YRKPH.

Perrin River - Upper Estuary Reservoir River
Shellfishing (Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.052

Sources:

Non-Point Source

York River Basin

Cause Group Code: F27E-32-SF UT to Cedarbush Creek

Cause Location: Described in the VDH Notice and Description of RESTRICTED Shellfish condemnation # 047-078 (effective

20150804).

City / County: Gloucester Co. York Co.

Use(s): Shellfishing

Cause(s) / VA Category: Fecal Coliform / 4A

The Shellfish Use is impaired based on the Restricted Shellfish GA # 047-078 D effective date 20150804. Impairment is nested within the TMDL for Shellfish Areas listed due to bacteria contamination for York River: Gloucester Point to Jones Creek. The new impairment is located within existing TMDL watershed with similar land use. Reductions for Cedarbush Cr in the TMDL are 91% for the 90th percentile for Fecal Coliform. The necessary reductions to meet water quality standards are 100% for human, livestock and pets with 45% reductions to wildlife.

Cycle TMDL
Cause
Cause
Assessment Unit / Water Name / Location Desc.
Category Cause Name
Cycle TMDL
First Dev. Water
Category Cause Name
Listed Priority Size
CAT-F27F CDB04A18 / UT to Cedarbush Creek / UT at Mouth of 4A Fecal Coliform
2018 L 0.029

VAT-F27E_CDB04A18 / UT to Cedarbush Creek / UT at Mouth of 4A Fecal Coli Cedarbush Creek. CBP segment YRKPH. RESTRICTED condemnation # 047-078 (effective 20180804).

UT to Cedarbush Creek

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Fecal Coliform - Total Impaired Size by Water Type: 0.029

Sources:

Livestock (Grazing or Wastes from Pets Waterfowl Wildlife Other than Feeding Operations) Waterfowl Waterfowl

York River Basin

MPNOH
Draft 2020

Cause Group Code: MPNOH-DO-BAY Mattaponi River

Cause Location: The oligonaline Mattaponi estuary.

City / County: King And Queen Co. King William Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4A

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. This included the entire tidal portion of the Mattaponi River. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. During the 2002 cycle, dissolved oxygen and chlorophyll A violation rates at multiple monitoring stations were all acceptable. Since the listing was based solely on the EPA overlist, the impairment was considered Nutrients/Eutrophication Biological Indicators.

However, during the 2006 cycle, the Chesapeake Bay water quality standards were implemented. The area failed both the Open Water default summer criteria and the rest-of-year criteria of 5 mg/L.

Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted in the 2008 cycle. The specific criteria recognize that DO is naturally depressed in the rivers due to their extensive marsh systems. During the 2016 to 2020 cycles, MPNOH fails the OW summer criteria. The Rest-of-Year criteria is met. The TMDL was approved by the EPA on 12/29/2010; therefore, the estuary is considered Category 4A.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F24E_MPN03B02 / Mattaponi River / Tidal freshwater/oligohaline boundary to Melrose Landing at Route 602	4A	Dissolved Oxygen	2006	L	0.423
MPNOH					
VAP-F24E_MPN03C06 / Mattaponi River / Melrose Landing (Route 602) to Heartquake Creek.	4A	Dissolved Oxygen	2006	L	0.717
MPNOH					
VAP-F24E_ZZZ02A06 / Unsegmented estuaries in F24 / Unsegmented portion of the watershed within MPNOH	4A	Dissolved Oxygen	2006	L	0.102
VAP-F25E_BMC01A08 / Burnt Mill Creek / Tidal limit to mouth a Mattaponi River	t 4A	Dissolved Oxygen	2006	L	0.054
MPNOH					
VAP-F25E_CBN01A00 / Corbin Creek / Corbin Pond to tidal lim	it 4A	Dissolved Oxygen	2006	L	0.037
MPNOH					
VAP-F25E_MPN05A00 / Mattaponi River / Mattaponi River from Heartquake Creek to the downstream boundary of VDH-DSS 049-004G, 8/15/2018	4A	Dissolved Oxygen	2006	L	1.292
MPNOH					
VAP-F25E_MPN05B06 / Mattaponi River / From VDH-SFC 049-004B, 8/15/2018 to the oligohaline/York mesohaline boundary.	4A	Dissolved Oxygen	2006	L	0.384
MPNOH					
VAP-F25E_ZZZ01A00 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed.	4A	Dissolved Oxygen	2006	L	0.067

Appendix 5 - 3348

York River Basin

VAP-F25E_ZZZ02A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004B, 8/15/2018.

Dissolved Oxygen

2006

0.006

MPNOH

Mattaponi River

Aquatic Life

Estuary (Sq. Miles) Reservoir River (Acres) (Miles)

L

Dissolved Oxygen - Total Impaired Size by Water Type: 3.081

Sources:

Agriculture Atmospheric Deposition -

Nitrogen

Loss of Riparian Habitat Municipal Point Source

Discharges

Industrial Point Source

Discharge

Sources Outside State Jurisdiction or Borders Internal Nutrient Recycling

Wet Weather Discharges (Point Source and

Combination of Stormwater,

SSO or CSO)

York River Basin

Cause Group Code: MPNTF-DO-BAY Mattaponi River

Cause Location: The tidal freshwater Mattaponi mainstem.

City / County: King And Queen Co. King William Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4D

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. This included the entire tidal mainstem of the Mattaponi River. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. During the 2002 cycle, dissolved oxygen and chlorophyll a exceedance rates at multiple monitoring stations were all acceptable (see below). Since the listing was based solely on the EPA overlist, the impairment was considered Nutrients/Eutrophication Biological Indicators.

During the 2006 cycle, the Chesapeake Bay water quality standards were implemented. The tidal freshwater portion of the Mattaponi had acceptable SAV acreages and was considered fully supporting of the Shallow Water Use. However, the area failed the default CB 30-day open water summer criteria of 5.5 mg/L.

Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted in the 2008 cycle. The specific criteria recognize that dissolved oxygen is naturally depressed in the rivers due to their extensive marsh systems. The Mattaponi Tidal Freshwater segment is in attainment of both the site-specific 30-day open water summer DO criteria and the 30-day Rest of Year DO criteria. The Shallow Water Use is fully supporting the SAV acreage criteria.

Although the Mattaponi Tidal Freshwater segment is in attainment of every Chesapeake Bay criteria which is measured, there is insufficient information to assess the Migratory Spawning Use or the other Open Water Use's dissolved oxygen frequency criteria; therefore, the mainstem must remain impaired due to EPA's overlisting (nutrients/eutrophication biological indicators). The TMDL is was approved on 12/29/2010, so the mainstem Mattaponi is considered Category 4D.

Note: The tributaries are considered Category 2C because they were not included in the overlist.

Previously MPNTF-BNUT-BAY

Dissolved Oxygen - Total	mpaired	d Size by Water Type:	3.300			
Mattaponi River Aquatic Life			Estuary (Sq. Miles)		ervoir res)	River (Miles)
MPNTF						
MPNTF VAP-F24E_MPN03A98 / Mattaponi River / Garnetts Creek to tida freshwater/oligohaline boundary at approximately river mile 18	al 4D	Dissolved Oxygen		1998	L	1.384
MPNTF VAP-F23E_MPN03A06 / Mattaponi River / Aylett Creek to Garnetts Creek.	4D	Dissolved Oxygen		1998	L	1.756
VAP-F23E_MPN02A98 / Mattaponi River / From the limit of tide above the Route 360 bridge to Aylett Creek.	4D	Dissolved Oxygen		1998	L	0.159
Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size

York River Basin

Sources:

Agriculture

Atmospheric Deposition -

Nitrogen

Loss of Riparian Habitat Municipal Point Source

Discharges

Industrial Point Source

Discharge

Sources Outside State Jurisdiction or Borders Internal Nutrient Recycling

Wet Weather Discharges (Point Source and

Combination of Stormwater,

SSO or CSO)

York River Basin

Cause Group Code: PMKOH-DO-BAY Pamunkey River Oligohaline Estuary

Cause Location: The oligonaline Pamunkey estuary.

City / County: King William Co.

New Kent Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4A

The Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the Aquatic Life Use goal because a 1995 special study showed river subject to 33% violation rate of daily mean DO standard during warm weather conditions (May through October). The estuarine Pamunkey was considered fully allocated relative to dissolved oxygen and new discharges cannot result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine Pamunkey River.

However, during the 2006 cycle, the new Chesapeake Bay water quality standards were adopted. The oligohaline Pamunkey segment failed the default CB 30-day open water summer dissolved oxygen criteria of 5 mg/L.

During the 2008 cycle, Water Quality Standards specific for the Pamunkey and Mattaponi Rivers were adopted; the specific criteria recognize that dissolved oxygen is naturally depressed below the default criteria in the rivers due to their extensive marsh systems.

The TMDL was approved by the EPA on 12/29/2010.

In the 2018 cycle, the segment met all criteria that could be measured. The Pamunkey mainstem remained listed due to EPA's overlisting (Category 4D.) The tributaries were considered fully supporting (Category 2C.)

During the 2020 cycle, the Pamunkey Oligohaline estuary fails the site-specific 30-day open water summer DO criteria. The 30-day Rest of Year DO criteria is met. The mainstem and tributaries will all be considered impaired (Category 4A.)

Previously PMKOH-BNUT-BAY

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK05A18 / Pamunkey River / 0.5 miles above station 8-PMK017.90 downstream to Sweet Hall Landing.	n 4A	Dissolved Oxygen	1998	L	0.113
РМКОН					
VAP-F14E_PMK05B00 / Pamunkey River / Tidal freshwater/oligohaline boundary at approximately river mile 23.6 downstream to 0.5 mile above station 8-PMK017.90	4A	Dissolved Oxygen	1998	L	1.193
РМКОН					
VAP-F14E_PMK06A00 / Pamunkey River / Sweet Hall Landing to upstream boundary of VDH-DSS SFC 049-004A, 8/15/2018	4A	Dissolved Oxygen	1998	L	3.382
РМКОН					
VAP-F14E_PMK06B06 / Pamunkey River / VDH-DSS SFC 049-004A, 8/15/2018 to mesohaline boundary	4A	Dissolved Oxygen	1998	L	0.584
РМКОН					
VAP-F14E_ZZZ02A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within PMKOH	4A	Dissolved Oxygen	2020	L	0.265

York River Basin

VAP-F14E_ZZZ02B06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within SFC 004A & PMKOH

4A Dissolved Oxygen

2020

0.060

Pamunkey River Oligohaline Estuary

Aquatic Life

Estuary (Sq. Miles)

Reservoir (Acres)

L

River (Miles)

Dissolved Oxygen - Total Impaired Size by Water Type: 5.597

Sources:

Agriculture

Atmospheric Deposition - Nitrogen

Industrial Point Source Discharge

Internal Nutrient Recycling

Loss of Riparian Habitat

Municipal Point Source Discharges

Sources Outside State Jurisdiction or Borders Wet Weather Discharges (Point Source and

Combination of Stormwater,

SSO or CSO)

York River Basin

Cause Group Code: PMKTF-DO-BAY Pamunkey River

Cause Location: The tidal freshwater Pamunkey River mainstem.

City / County: Hanover Co. King William Co. New Kent Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4D

The tidal Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the Aquatic Life Use goal because a 1995 special study showed river subject to 33% violation rate of daily mean DO standard during warm weather conditions May through October. The estuarine Pamunkey River was considered fully allocated relative to dissolved oxygen and new discharges could not result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine Pamunkey River.

During the 2006 cycle, the new Chesapeake Bay water quality standards were adopted. The tidal freshwater Pamunkey segment failed the default CB 30-day open water summer dissolved oxygen criteria of 5.5 mg/L. Water quality standards specific for the Pamunkey and Mattaponi Rivers were adopted and the new criteria were used in the 2008 cycle. The specific criteria recognize that dissolved oxygen is naturally depressed in the rivers due to their extensive marsh systems. The Pamunkey Tidal Freshwater segment is in attainment of both the site-specific 30-day open water summer DO criteria and the 30-day Rest of Year DO criteria. The Shallow Water Use is fully supporting the SAV acreage criteria.

Although the Pamunkey Tidal Freshwater segment is in attainment of every Chesapeake Bay criteria which are measured, the EPA considers there to be insufficient information to assess the Migratory Spawning Use or the other Open Water Use's dissolved oxygen frequency criteria; therefore, the mainstem must remain impaired due to EPA's overlisting.

The Chesapeake Bay TMDL was approved by the EPA on 12/31/2010. The Pamunkey is a Cat 4D water. The tributaries are considered Category 2C.

Previously PMKTF-BNUT-BAY

Assessment Unit / Water Name / Location Desc.	Cause Category Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F13E_PMK01A98 / Pamunkey River / Extent of tide near Totopotomoy Creek to Pampatike Landing.	4D Dissolved Oxygen	1998	L	0.307
PMKTF VAP-F13E_PMK02A98 / Pamunkey River / Pampatike Landing downstream to Jacks Creek.	4D Dissolved Oxygen	1998	L	0.783
PMKTF VAP-F13E_PMK03A06 / Pamunkey River / Jacks Creek downstream to Macon Creek.	4D Dissolved Oxygen	1998	L	0.115
PMKTF VAP-F14E_PMK02A00 / Pamunkey River / Macon Creek to downstream extent of tidal freshwater segment at approximately riv mile 23.6	4D Dissolved Oxygen er	1998	L	3.638
PMKTF				

York River Basin

Pamunkey River

Aquatic Life

Estuary Reservoir River
(Sq. Miles) (Acres) (Miles)

Dissolved Oxygen - Total Impaired Size by Water Type: 4.843

Sources:

Agriculture Atmospheric Deposition - Industrial Point Source Internal Nutrient Recycling

Nitrogen Discharge

Loss of Riparian Habitat Municipal Point Source Sources Outside State Wet Weather Discharges Unisdiction or Borders (Point Source and

Discharges Jurisdiction or Borders (Point Source and Combination of Stormwater, SSO or CSO)

York River Basin

Cause Group Code: YRKMH-DO-BAY York Mesohaline

Cause Location: The York mesohaline segment, including the applicable portions of the Pamunkey and Mattaponi Rivers.

City / County: Gloucester Co. James City Co. King And Queen Co. King William Co. New Kent Co.

Williamsburg City York Co.

Use(s): Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4A

The Pamunkey River was initially listed on the 1998 303(d) list as fully supporting but threatened of the aquatic life use goal because a 1995 special study showed river subject to 33% exceedance rate of daily mean dissolved oxygen (DO) standard during warm weather conditions May through October. The estuarine Pamunkey River is considered fully allocated relative to dissolved oxygen; new discharges cannot result in further DO depression.

The Chesapeake Bay and its tidal tributaries were added by the EPA to the 1998 303(d) list. EPA listed the impairment as dissolved oxygen exceedances caused by nutrient overenrichment. This listing included the entire mainstem estuarine York, Pamunkey, and Mattaponi Rivers.

New Chesapeake Bay water quality standards have since been adopted. In the 2020 cycle, the mesohaline York segment (which includes the mouths of the Pamunkey and Mattaponi Rivers) fails the 30-day mean open water summer dissolved oxygen criteria. The rest-of-year criteria was met.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010. The segment is considered Category 4A.

	Cause	e ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth	4A	Dissolved Oxygen	1998	L	0.398
YRKMH					
VAP-F14E_ZZZ03A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within YRKMH	4A	Dissolved Oxygen	2006	L	0.077
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004F, 8/15/2018.	4A	Dissolved Oxygen	2006	L	0.209
YRKMH					
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 8/15/2018 within Mattaponi River mainstem	4A 1.	Dissolved Oxygen	2006	L	0.641
YRKMH					
VAP-F25E_ZZZ03A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004F, 8/15/2018.	4A	Dissolved Oxygen	2006	L	0.031
YRKMH					
VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Conditionally Approved area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 8/15/2018).	4A	Dissolved Oxygen	2006	L	0.094
VAT-F26E_ABD01B08 / Aberdeen Creek - Mouth / Southeast of Clay Bank, south of Rt. 631. From the end of TMDL (07) coverage downstream to the mouth. Portion of CBP segment YRKMH. Conditionally Approved shellfish direct harvesting condemnation #	4A	Dissolved Oxygen	2006	L	0.010

York River Basin					
047-078 8/15/2018).					
VAT-F26E_ABD02A20 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the start of Shellfish Admin-Cond. Portion of CBP segment YRKMH. Portion of DSS shellfish Admin-Condemn # 047-078 A (effective 8/15/2018).	4A	Dissolved Oxygen	2006	L	0.011
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128 B (effective 8/07/2018).	4A	Dissolved Oxygen	2006	L	0.116
VAT-F26E_ADM01B12 / Adams Creek- Lower / Eastern shore of York River near Purtan Island. CBP segment YRKMH. Portion of 1998 impairment open in DSS shellfish condemnation # 048-128 (effective 8/07/2018).	4A	Dissolved Oxygen	2006	L	0.072
VAT-F26E_BAK01A00 / Bakers Creek / North shore York R SE of West Point Municipal Airport & NW of Hockley Cr. Estuarine portion of creek. CBP segment YRKMH. DSS Admin-Condemnation.	4A	Dissolved Oxygen	2006	L	0.039
VAT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004 (20180815)	4A	Dissolved Oxygen	2006	L	0.017
VAT-F26E_BND01A06 / Bland Creek / North shore York R west of Sassafras. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. Conditionally approved condemnation #048-128 20180807.	4A	Dissolved Oxygen	2006	L	0.051
VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-087 B, 20180807.	4A	Dissolved Oxygen	2006	L	0.025
VAT-F26E_FER01A08 / Ferry Creek / South shore trib to York R. SW of West Point. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. Portion of DSS shellfish ADMIN condemnation # 049-004 A (effective 8/15/2018).	4A	Dissolved Oxygen	2006	L	0.004
VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072 A (effective 20160722).	4A	Dissolved Oxygen	2006	L	0.016
VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004 C (effective 8/15/2018).	4A	Dissolved Oxygen	2006	L	0.055
VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective 20180815).	4A	Dissolved Oxygen	2006	L	0.051
VAT-F26E_PHB01A00 / Philbates Creek / South shore trib to York R. NW of Belleview. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. VDH-DSS #049-009 shellfish Conditional Approval (effective 20180815).	4A	Dissolved Oxygen	2006	L	0.013
VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 8/07/2018. CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	0.451

York River Basin					
VAT-F26E_PTK02A08 / Morris Bay at mouth of Poropotank River / From end of the upstream DSS condemnation downstream to the mouth. CBP segment YRKMH. DSS shellfish direct harvesting OPEN condemnation # 048-128 (effective date 20180807).	4A	Dissolved Oxygen	2006	L	0.606
VAT-F26E_PTN01A08 / Purtan & Leigh Creeks / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay. CBP segment YRKMH. DSS shellfish Open condemnation # 048-128 (effective 20180807).	4A	Dissolved Oxygen	2006	L	0.098
VAT-F26E_PTN02A20 / Purtan Creek / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay just prior to the formation of the mouth. CBP segment YRKMH. DSS shellfish Admin-Condemnation # 048-128 C (effective 20180807).	4A	Dissolved Oxygen	2006	L	0.089
VAT-F26E_QEN01A02 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH.	4A	Dissolved Oxygen	1998	L	0.296
Split in 2012 cycle.					
VAT-F26E_QEN01B12 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	4A	Dissolved Oxygen	1998	L	0.136
VAT-F26E_RBN01A08 / Robinson Creek / North shore York R SE of West Point Municipal Airport. Estuarine portion of creek. CBP segment YRKMH. Part of VDH-DSS Conditional Approval 049-004 (effective 20180815)	4A	Dissolved Oxygen	2006	L	0.012
VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20180807).	4A	Dissolved Oxygen	2006	L	0.174
VAT-F26E_SND01A08 / Sandy Creek / North shore York R near Allmondsville. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 047-072, 20160722.	4A	Dissolved Oxygen	2006	L	0.007
VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20180807).	4A	Dissolved Oxygen	2006	L	0.026
VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20180807).	4A	Dissolved Oxygen	2006	L	0.133
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20180815). CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 8/15/2018), approx. Goff Point . CBP segment YRKMH.	4A	Dissolved Oxygen	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049 004 C, 8/15/2018. CB Seg - YRKMH.	4A -	Dissolved Oxygen	2006	L	0.029

York River Basin						
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20180815	4A	Dissolved Oxygen		2006	L	0.042
YRKMH						
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 8/3/2015 . CBP segment YRKMH.	4A	Dissolved Oxygen		2006	L	0.457
VAT-F26E_YRK02A14 / York River (Lower Middle MSN) / Segment starts south of New Kent and James City Boundary and extends downstream to the MSN boundary near Mt. Folly/Poropotank Bay. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	4A	Dissolved Oxygen		2006	L	2.680
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20180815. CBP segment YRKMH.	4A	Dissolved Oxygen		2006	L	2.125
VAT-F26E_YRK03A00 / York River (Lower Middle) / Segment starts at end of MSN boundary near Mt. Folly/Poropotank Bay and extends downstream to the mesohaline/polyhaline boundary. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	4A	Dissolved Oxygen		2006	L	20.372
VAT-F26E_YRK03B12 / York River (Lower Middle) / Portion of York River at Carter Creek north of Camp Peary. Within VDH-DSS Open condemnation-type #049-004 , 20180815. CB segment YRKMH.	4A	Dissolved Oxygen		2006	L	0.023
VAT-F26E_ZZZ01A00 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. trib SW of Gressit) within MSN area. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 049-004 (effective 20180815)	4A	Dissolved Oxygen		2006	L	0.008
VAT-F26E_ZZZ01B06 / Unsegmented estuaries in F26E / Non-segmented areas of F26E (N shore York R. tribs, upstream of Poropotank R.) below MSN boundary. CBP segment YRKMH. No DSS shellfish direct harvesting condemnation present.	4A	Dissolved Oxygen		2006	L	0.072
VAT-F26E_ZZZ02A06 / Unsegmented estuaries in F26E / Non-segmented areas within VDH-DSS OPEN condemnation 049-004 (effective 20180815). Includes Goalders Creek. CBP segment YRKMH.	4A	Dissolved Oxygen		2006	L	0.038
VAT-F26E_ZZZ02B18 / Unsegmented SF Condemned estuaries in F26E / Non-segmented areas within VDH-DSS Admin-Condemnation 049-004 A (effective 20180815). CBP segment YRKMH.	4A	Dissolved Oxygen		2006	L	0.043
York Mesohaline			Estuary		ervoir	River
Aquatic Life	!	d Cina haa Matau Tara	(Sq. Miles)	(Ac	res)	(Miles)
Dissolved Oxygen - Total Imp	baire	a Size by water Type:	34.892			

York River Basin

Sources:

Agriculture

Atmospheric Deposition -Nitrogen

Loss of Riparian Habitat

Wet Weather Discharges (Point Source and Combination of Stormwater, SSO or CSO)

Municipal Point Source Discharges

Industrial Point Source

Discharge

Sources Outside State Jurisdiction or Borders Internal Nutrient Recycling

Wet Weather Discharges (Non-Point Source)

York River Basin

Cause Group Code: YRKMH-EBEN-BAY Adams Creek - Upper and the lower York River

Cause Location: This cause encompasses upper portions of Adams Creek and a portion of the lower York River.

City / County: Gloucester Co. King And Queen Co. King William Co. New Kent Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

The Aquatic Life Use is impaired for the benthic BIBI assessment for the YRKMHa in the 2020 IR. The 2020 IR cycle is the initial list date for the estuarine bioassessment.

_	Cause Category Cause Name		Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128 B (effective 8/07/2018).	5A Estuarine Bioassess	ments	2020	L	0.116
VAT-F26E_YRK02E20 / York River (lower middle) / York River from Goff Point (end of Restricted-Condemnation) to Goalders Creek. VDH new Conditionally Approved condemnation 20180815. CBP segment YRKMH.	5A Estuarine Bioassess	ments	2018	L	2.125
Adams Creek - Upper and the lower York River Aquatic Life		Estuary (Sq. Miles)		ervoir eres)	River (Miles)

Estuarine Bioassessments - Total Impaired Size by Water Type:

2.241

Sources:

Source Unknown

York River Basin

Cause Group Code: YRKMH-SAV-BAY York Mesohaline

Cause Location: The York mesohaline segment, including the applicable portions of the Pamunkey and Mattaponi Rivers.

City / County: Gloucester Co. James City Co. King And Queen Co. King William Co. New Kent Co.

Williamsburg City York Co.

Use(s): Aquatic Life Shallow-Water Submerged

Aquatic Vegetation

Cause(s) / VA Category: Aquatic Plants (Macrophytes) / 4A

During the 2006 cycle, the Chesapeake Bay water quality standards were adopted. The mesohaline York segment (which includes the mouths of the Pamunkey and Mattaponi Rivers) fails the Shallow Water Subuse's submerged aquatic vegetation (SAV) acreage requirements. There is insufficient data to assess the water clarity acreage criteria.

The Chesapeake Bay TMDL was approved by the EPA on 12/29/2010. YRKMH is considered Category 4A.

	Cause Catego	e ry Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAP-F14E_PMK07A04 / Pamunkey River / Mesohaline boundary to mouth	4A	Aquatic Plants (Macrophytes)	2006	L	0.398
YRKMH					
VAP-F14E_ZZZ03A06 / Unsegmented estuaries in F14 / Unsegmented portion of the watershed within YRKMH	4A	Aquatic Plants (Macrophytes)	2006	L	0.077
VAP-F25E_MPN06A04 / Mattaponi River / The Mattaponi mainstem within VDH advisory 049-004F, 8/15/2018.	4A	Aquatic Plants (Macrophytes)	2006	L	0.209
YRKMH					
VAP-F25E_MPN06B06 / Mattaponi River / Portion of VDH-DSS condemnation 049-004A, 8/15/2018 within Mattaponi River mainstem	4A 1.	Aquatic Plants (Macrophytes)	2006	L	0.641
YRKMH					
VAP-F25E_ZZZ03A06 / Unsegmented estuaries in F25 / Unsegmented portion of the watershed within SFC 049-004F, 8/15/2018.	4A	Aquatic Plants (Macrophytes)	2006	L	0.031
YRKMH					
VAT-F26E_ABD01A00 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the end of Shellfish Conditionally Approved area. Portion of CBP segment YRKMH. Portion of DSS shellfish direct harvesting condemnation # 047-078 A (effective 8/15/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.094
VAT-F26E_ABD01B08 / Aberdeen Creek - Mouth / Southeast of Clay Bank, south of Rt. 631. From the end of TMDL (07) coverage downstream to the mouth. Portion of CBP segment YRKMH. Conditionally Approved shellfish direct harvesting condemnation # 047-078 8/15/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.010
VAT-F26E_ABD02A20 / Aberdeen Creek - Upper / Southeast of Clay Bank, south of Rt. 631. From the end of tidal waters downstream to the start of Shellfish Admin-Cond. Portion of CBP segment YRKMH. Portion of DSS shellfish Admin-Condemn # 047-078 A (effective 8/15/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.011
VAT-F26E_ADM01A00 / Adams Creek-Upper / Eastern shore of	4A	Aquatic Plants (Macrophytes)	2006	L	0.116

York River Basin

Tork River Basin					
York River near Purtan Island. CBP segment YRKMH. DSS shellfish restricted condemnation and Conditionally Approved # 048-128 B (effective 8/07/2018).					
VAT-F26E_ADM01B12 / Adams Creek- Lower / Eastern shore of York River near Purtan Island. CBP segment YRKMH. Portion of 1998 impairment open in DSS shellfish condemnation # 048-128 (effective 8/07/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.072
VAT-F26E_BAK01A00 / Bakers Creek / North shore York R SE of West Point Municipal Airport & NW of Hockley Cr. Estuarine portion of creek. CBP segment YRKMH. DSS Admin-Condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	0.039
VAT-F26E_BKS01A08 / Baker Creek / South shore trib to York R. S of Plum Pt. & E of Davis Pond. Estuarine portion of creek with York River. CBP segment YRKMH. DSS Cond 049-004 (20180815)	4A	Aquatic Plants (Macrophytes)	2006	L,	0.017
VAT-F26E_BND01A06 / Bland Creek / North shore York R west of Sassafras. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. Conditionally approved condemnation #048-128 20180807.	4A	Aquatic Plants (Macrophytes)	2006	L	0.051
VAT-F26E_CTC01A06 / Carter Creek / Located in York County near Skimino. From estuarine/riverine transition to mouth. CBP segment YRKMH. Portion of DSS Restricted condemnation # 050-087 B, 20180807.	4A	Aquatic Plants (Macrophytes)	2006	L	0.025
VAT-F26E_FER01A08 / Ferry Creek / South shore trib to York R. SW of West Point. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. Portion of DSS shellfish ADMIN condemnation # 049-004 A (effective 8/15/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.004
VAT-F26E_FOX01A06 / Fox Creek / North shore trib to York River. Located southeast of Allmondsville in Gloucester Co. From estuarine/riverine transition to mouth. CBP segment YRKMH. DSS condemnation # 047-072 A (effective 20160722).	4A	Aquatic Plants (Macrophytes)	2006	L	0.016
VAT-F26E_HCK01A04 / Hockley Creek / North shore York R NW of Belleview. Estuarine portion of creek. CBP segment YRKMH. Portion of DSS condemnation # 049-004 C (effective 8/15/2018).	4A	Aquatic Plants (Macrophytes)	2006	L,	0.055
VAT-F26E_JNS01A00 / Jones Creek / NW of Clay Bank, between Rts 618 & 616. Portion of CBP segment YRKMH. Described in DSS shellfish direct harvesting condemnation # 047-072B (effective 20180815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.051
VAT-F26E_PHB01A00 / Philbates Creek / South shore trib to York R. NW of Belleview. Estuarine portion of creek. From dam to confluence with York River. CBP segment YRKMH. VDH-DSS #049-009 shellfish Conditional Approval (effective 20180815).	4A	Aquatic Plants (Macrophytes)	2006	L	0.013
VAT-F26E_PTK01A00 / Poropotank River / North shore of York River near Purtan Island. Forms boundary of King and Queen/Gloucester Co. From end of tidal waters downstream to end of DSS condemnation # 048-128A, 8/07/2018. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.451
VAT-F26E_PTK02A08 / Morris Bay at mouth of Poropotank River / From end of the upstream DSS condemnation downstream to the mouth. CBP segment YRKMH. DSS shellfish direct harvesting OPEN condemnation # 048-128 (effective date 20180807).	4A	Aquatic Plants (Macrophytes)	2006	L	0.606
VAT-F26E_PTN01A08 / Purtan & Leigh Creeks / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay. CBP segment YRKMH. DSS shellfish Open condemnation # 048-128	4A	Aquatic Plants (Macrophytes)	2006	L	0.098

York River Basin (effective 20180807).					
VAT-F26E_PTN02A20 / Purtan Creek / North shore of York River at Purtan Bay. Forms headwaters of Purtan Bay just prior to the formation of the mouth. CBP segment YRKMH. DSS shellfish Admin-Condemnation # 048-128 C (effective 20180807).	4A	Aquatic Plants (Macrophytes)	2006	L	0.089
VAT-F26E_QEN01A02 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of tidal waters (below dam at Waller Mill Res.) downstream to end of DSS shellfish condemnation # 051-035 A, 8/14/2018. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.296
Split in 2012 cycle.					
VAT-F26E_QEN01B12 / Queens Creek / South shore York River, south of Camp Peary Naval Reservation. From end of DSS shellfish condemnation # 051-035 (20180814). downstream to mouth. CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.136
VAT-F26E_RBN01A08 / Robinson Creek / North shore York R SE of West Point Municipal Airport. Estuarine portion of creek. CBP segment YRKMH. Part of VDH-DSS Conditional Approval 049-004 (effective 20180815)	4A	Aquatic Plants (Macrophytes)	2006	L	0.012
VAT-F26E_SKM01A00 / Skimino Creek / North of Skimino Farms. Boundary of James City/York Co. From estuarine/riverine transition (dam at Barlows Pond, Rt 604) to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-087 A (effective 20180807).	4A	Aquatic Plants (Macrophytes)	2006	L	0.174
VAT-F26E_SND01A08 / Sandy Creek / North shore York R near Allmondsville. Estuarine portion of creek, from the tidal limit to mouth. CBP segment YRKMH. DSS (OPEN) shellfish direct harvesting condemnation # 047-072, 20160722.	4A	Aquatic Plants (Macrophytes)	2006	L	0.007
VAT-F26E_TSK01A00 / Taskinas Creek / West of Purtan Island, south of Croaker Landing. From end of tidal waters downstream to mouth. CBP segment YRKMH. DSS shellfish condemnation # 050-073 B (effective 20180807).	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
VAT-F26E_WRE01A00 / Ware Creek / South of Terrapin Pt., W of Purtan Island. From end of tidal waters downstream to mouth; includes piece of York SF Cond, CBP segment YRKMH. DSS shellfish condemnation # 050-073 A (effective 20180807).	4A	Aquatic Plants (Macrophytes)	2006	L	0.133
VAT-F26E_YRK01A04 / York River / York River at Goalders Creek downstream to the boundary of DSS OPEN condemnation # 049-004 (effective 20180815). CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	3.962
VAT-F26E_YRK01B10 / York River / Start of York River at West Point (RM 32.0) downstream to the boundary of ADMIN COND # 049-004 A (effective 8/15/2018), approx. Goff Point . CBP segment YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	1.086
VAT-F26E_YRK01C12 / York River-at Hockley Cr / York River segment at mouth of Hockley Cr within VDH DSS Condemnation 049-004 C, 8/15/2018. CB Seg - YRKMH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F26E_YRK01D12 / York River / Portion of York River within VDH Seasonal Cond 0049-004 effective date 20180815	4A	Aquatic Plants (Macrophytes)	2006	L	0.042
YRKMH					
VAT-F26E_YRK01E14 / York River / York River from Goff Point (end of Admin Cond) to the Conditional Approval condemnation. VDH new Restricted Condemnation 049-004 A 8/3/2015 . CBP	4A	Aquatic Plants (Macrophytes)	2006	L	0.457

York River Basin							
segment YRKMH.							
VAT-F26E_YRK02A14 / York Riv Segment starts south of New Ken extends downstream to the MSN I Bay. CBP segment YRKMH. No D condemnation present.	t and James City Boundary and boundary near Mt. Folly/Poropotanl	4A K	Aquatic Plants (Macropl	nytes)	2006	L	2.680
VAT-F26E_YRK02E20 / York Riv from Goff Point (end of Restricted Creek. VDH new Conditionally Ap CBP segment YRKMH.	-Condemnation) to Goalders	4A	Aquatic Plants (Macropl	nytes)	2006	L	2.125
VAT-F26E_YRK03A00 / York Riv starts at end of MSN boundary ne extends downstream to the mesol segment YRKMH. No DSS shellfis present.	ar Mt. Folly/Poropotank Bay and	4A	Aquatic Plants (Macropl	nytes)	2006	L	20.372
VAT-F26E_YRK03B12 / York Riv York River at Carter Creek north of Open condemnation-type #049-00 YRKMH.	of Camp Peary. Within VDH-DSS	4A	Aquatic Plants (Macropl	nytes)	2006	L	0.023
VAT-F26E_ZZZ01A00 / Unsegm segmented areas of F26E (N show MSN area. CBP segment YRKMH harvesting condemnation # 049-0	re York R. trib SW of Gressit) withir I. DSS (OPEN) shellfish direct	4A 1	Aquatic Plants (Macropl	nytes)	2006	L	0.008
VAT-F26E_ZZZ01B06 / Unsegm segmented areas of F26E (N short Poropotank R.) below MSN bound DSS shellfish direct harvesting co	re York R. tribs, upstream of dary. CBP segment YRKMH. No	4A	Aquatic Plants (Macropl	nytes)	2006	L	0.072
VAT-F26E_ZZZ02A06 / Unsegm segmented areas within VDH-DS3 (effective 20180815). Includes Go YRKMH.	S OPEN condemnation 049-004	4A	Aquatic Plants (Macropl	nytes)	2006	L	0.038
VAT-F26E_ZZZ02B18 / Unsegm F26E / Non-segmented areas wi Condemnation 049-004 A (effectiv YRKMH.		4A	Aquatic Plants (Macropl	nytes)	2006	L	0.043
York Mesohaline				Estuary	Rese		River
Shallow-Water Submerged Aquat	ic Vegetation atic Plants (Macrophytes) - Total In	nnaired	d Size by Water Type:	(Sq. Miles) 34.892	(Acı	res)	(Miles)
	(s. sprijtos) Total III			U-1100E			
Sources: Agriculture	Atmospheric Deposition -	Clean	Sediments	Industria	al Point :	Source	
	Nitrogen			Dischar			
Internal Nutrient Recycling		Munici Discha	ipal Point Source arges	Sedimer (Clean S			l
Sources Outside State Jurisdiction or Borders		(Point	/eather Discharges Source and				

Combination of Stormwater,

SSO or CSO)

York River Basin

Cause Group Code: YRKPH-DO-BAY Chesapeake Bay segment YRKPH

Cause Location: This cause encompasses the polyhaline portion of the York.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life Deep-Water Aquatic Life Open-Water Aquatic Life

Cause(s) / VA Category: Dissolved Oxygen / 4A

The Aquatic Life and Open-Water Aquatic Life Use is impaired based on failure to meet the dissolved oxygen criteria for Open Water - Summer and Rest of Year. There is insufficient data to assess the remaining shorter-term dissolved oxygen criteria for these uses. EPA approved Chesapeake Bay TMDL 12/29/2010.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ry Cause Name	Cycle First Listed	Dev.	Water Size
VAT-F27E_CDB01A00 / Cedarbush Creek - Upper [TMDL-bact] / North shore York River, NW of Catlett Islands. From the end of tida waters downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH. DSS shellfish direct harvesting condemnation # 047-078 C (effective 20180815).	al	Dissolved Oxygen	2006	L	0.078
VAT-F27E_CDB02A00 / Cedarbush Creek - Mouth / North shore York River, NW of Catlett Islands. CBP segment YRKPH. Portion of DSS shellfish condemnation # 047-078 C (20180804) not included TMDL.	of	Dissolved Oxygen	2006	L	0.015
VAT-F27E_CDB03A16 / Cedarbush Creek (Mouth) / Mouth of Cedarbush Creek. CBP segment YRKPH. No DSS OPEN condemnation # 047-078 (effective 20180815).	4A	Dissolved Oxygen	2006	L	0.090
VAT-F27E_CDB04A18 / UT to Cedarbush Creek / UT at Mouth of Cedarbush Creek. CBP segment YRKPH. RESTRICTED condemnation # 047-078 (effective 20180804).	of 4A	Dissolved Oxygen	2006	L	0.029
VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co.) - Upper portic [TMDL-bact] / North shore York River, north of Catlett Islands. Fro the end of tidal waters downstream to the end of DSS condemnatic 047-078B, 20180815 . Portion of CBP segment YRKPH.	m	Dissolved Oxygen	2006	L	0.180
Split in 2012 cycle					
VAT-F27E_CRT02A00 / Carter Cr. (Gloucester Co.) - Lower- Mou / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS OPEN shellfish direct harvesting 047-078 (effective date 20150804).	ıth 4A	Dissolved Oxygen	2006	L	0.177
VAT-F27E_FEL01A00 / Felgates Creek / South of Pennimon Sp within Naval Weapons Station. Segment extends from headwaters downstream to mouth. CBP segment YRKPH. DSS Admin condemnation # 051-035 D (effective 8/14/2018)		Dissolved Oxygen	2006	L	0.236
VAT-F27E_IFC01A00 / Indian Field Creek / Southeast of Pennimon Spit, within Naval Weapons Station. CBP segment YRKPH. DSS condemnation (ADMINISTRATIVE) # 051-040 A (effective 2018-8-14).	4A	Dissolved Oxygen	2006	L	0.108
VAT-F27E_KNG01A02 / King Creek - Upper / South shore of Yo River. East of Pennimon Spit, within Naval Weapons Station facility From end of tidal waters downstream to end of DSS condemnation 051-035C, 8/14/2018. CBP segment YRKPH.	/.	Dissolved Oxygen	2006	L	0.128

York River Basin					
Shortened in 2012 cycle.					
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.072
Shortened in 2012 cycle.					
VAT-F27E_POP01A16 / Poplar Creek / Entirety of Poplar Creek. CBP segment YRKPH. No DSS condemnations.	4A	Dissolved Oxygen	2006	L	0.146
VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation # 046-081A (effective 20180906). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L,	0.052
VAT-F27E_PRN01C12 / Perrin River - Upper Middle / North shore York River near Cuba Island. Portion of DSS Restricted-Condemnation 046-081, 20180906. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.030
VAT-F27E_PRN02A00 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Portion of DSS seasonal condemnation # 046-081 M1 (effective 20180906) addressed in the TMDL.	4A	Dissolved Oxygen	2006	L	0.057
VAT-F27E_PRN02B12 / Perrin River - Lower Mouth / North shore York River near Cuba Island. CBP segment YRKPH. From boundary of DSS condemnation 81, 7/21/1996 to end of seasonal condemnation # 046-081 M1 (effective 20180906).	4A	Dissolved Oxygen	2006	L	0.048
VAT-F27E_SRH01A00 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northeast branch of Sarah Creek near Guinea Neck. DSS OPEN #046-052 B (20180906). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.110
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20180906.	4A	Dissolved Oxygen	2010	L	0.029
VAT-F27E_SRH01D14 / Sarah Creek / North shore trib of York River near Gloucester Point. Segment extends from end of OPEN SF Cond 046-052 to end of TMDL area near Rt 642. CBP segment YRKPH. DSS condemnation # 046-052 M1 (effective 20180906).	4A	Dissolved Oxygen	2010	L	0.062
VAT-F27E_SRH02A08 / Sarah Creek - Lower / North shore trib to York River near Gloucester Point. End of TMDL study area to mouth. CBP segment YRKPH. DSS seasonal condemnation # 046-052 M1 (effective 20180906).	4A	Dissolved Oxygen	2008	L	0.026
VAT-F27E_SRH02B16 / Sarah Creek - Northeast Branch, Middle / North shore York River near Gloucester Point. Mainstem and tribs to the Northeast Branch. CBP segment YRKPH. DSS Restricted condemnation # 046-052 D (effective 09/06/2018).	4A	Dissolved Oxygen	2010	L	0.021
VAT-F27E_SRH03A20 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northern branch of Sarah Creek near Guinea Neck. DSS Restricted-Condemnation #046-052 B (20180906). CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.003

York River Basin					
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS condemnation # 046-052 M1, A, C and E (effective 20180906). CBP segment YRKPH.	4A	Dissolved Oxygen	2010	L	0.193
VAT-F27E_TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of DSS shellfish direct harvesting condemnation # 047-003 A (effective 20170725). Portion of CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.139
VAT-F27E_TMB01B12 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of DSS shellfish Conditional Approval condemnation # 047-003 (effective 20170725). downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.077
VAT-F27E_TMB02A08 / Timberneck Creek - Middle / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS (OPEN) shellfish direct harvesting condemnation # 047-003 (effective 7/25/2017).	4A	Dissolved Oxygen	2008	L	0.034
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation present 20170725.	4A	Dissolved Oxygen	2008	L	0.188
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	4A	Dissolved Oxygen	2008	L	0.283
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	4A	Dissolved Oxygen	2006	L	10.393
YRKPH					
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20180814) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Dissolved Oxygen	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	4A	Dissolved Oxygen	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-027 (effective 20120808).	4A	Dissolved Oxygen	2006	L,	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	4A	Dissolved Oxygen	2004	L	11.657

York River Basin							
STP/Amoco / Described in VDH condemnation 052-006 B&C (effective)	- DSS AdminCond @ HRSD York -DSS (ADMINISTRATIVE) shellfish ective 20180503) adjacent Wormle d refinery. CBP segment YRKPH.	า	Dissolved Oxygen		2006	L	0.508
to USCG / Segment on Yorktow (ADMINISTRATIVE) shellfish cor	iver - DSS AdminCond @ Wormley in side (south shore) of river. DSS idemnation # 052-006 A (effective from Wormley Cr. to USCG Station gment YRKPH.		Dissolved Oxygen		2006	L	2.698
VAT-F27E_YRK02D12 / York R within VDH-DSS seasonal conde CBP segment YRKPH.	iver - Lower / Portion of York Rive mnation 046-052M1, 20180906.	er 4A	Dissolved Oxygen		2004	L	0.139
segmented estuarine areas of F2	oush and Timberneck Creeks. CBP	4A	Dissolved Oxygen		2006	L	0.112
Chesapeake Bay segment YR	(PH			Estuary	Reser		River
Aquatic Life	Dissolved Oxygen - Total I	mpaire	d Size by Water Type:	(Sq. Miles) 28.874	(Acre	es)	(Miles)
Sources:							
Agriculture	Atmospheric Deposition - Nitrogen	Indus Disch	trial Point Source arge	Internal	Nutrient	Recyc	eling
Loss of Riparian Habitat	Municipal Point Source Discharges		es Outside State liction or Borders	(Point S	eather Discource an ation of SCSO)	ıd	

York River Basin

Cause Group Code: YRKPH-EBEN-BAY York River - BIBI YRKPHa segments

Cause Location: This cause encompasses the polyhaline BIBI segment YRKPHa portions of the mainstem York River.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life

Cause(s) / VA Category: Estuarine Bioassessments / 5A

The Chesapeake Bay BIBI assessment is impaired for YRKPHa. Previously this segment was delisted in 2012 and had insufficient data up until now.

Assessment Unit / Water Name / Location Desc.	Cause Catego	e ory Cause Name	Cycle First Listed	TMDL Dev. Priority	Water Size
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.		Estuarine Bioassessments	2010	L	0.220
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation present 20170725.	5A	Estuarine Bioassessments	2010	L	0.188
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	5A	Estuarine Bioassessments	2004	L	10.393
YRKPH					
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20180814) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	5A	Estuarine Bioassessments	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-027 (effective 20120808).	5A	Estuarine Bioassessments	2006	L	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	5A	Estuarine Bioassessments	2004	L	11.657
VAT-F27E_YRK02B00 / York R - DSS AdminCond @ HRSD York STP/Amoco / Described in VDH-DSS (ADMINISTRATIVE) shellfish condemnation 052-006 B&C (effective 20180503) adjacent Wormley Cr., HRSD STP & power plant and refinery. CBP segment YRKPH.	5A	Estuarine Bioassessments	2004	L	0.508
VAT-F27E_YRK02C00 / York River - DSS AdminCond @ Wormley	5A	Estuarine Bioassessments	2004	L	2.698
Draft 2020 Appendi	x 5 - 33	370			

York River Basin

to USCG / Segment on Yorktown side (south shore) of river. DSS (ADMINISTRATIVE) shellfish condemnation # 052-006 A (effective 2018-05-03) (portion in York R), from Wormley Cr. to USCG Station, S shore to mid-channel. CBP segment YRKPH.

VAT-F27E_YRK02D12 / York River - Lower / Portion of York River 5A Estuarine Bioassessments within VDH-DSS seasonal condemnation 046-052M1, 20180906.

2018 L 0.139

CBP segment YRKPH.

York River - BIBI YRKPHa segments

Estuary Res (Sq. Miles) (A

Reservoir (Acres)

River (Miles)

Estuarine Bioassessments - Total Impaired Size by Water Type: 26.341

Sources:

Aquatic Life

Source Unknown

York River Basin

Cause Group Code: YRKPH-SAV-BAY Chesapeake Bay segment YRKPH

Cause Location: This cause encompasses the polyhaline portion of the York.

City / County: Gloucester Co. York Co.

Use(s): Aquatic Life Shallow-Water Submerged

Aquatic Vegetation

Cause(s) / VA Category: Aquatic Plants (Macrophytes) / 4A

The Aquatic Life Use Aquatic Plants [Macrophytes] use is impaired for the 2016 cycle based on not meeting the SAV criteria.

EPA approved Chesapeake Bay TMDL 12/29/2010.

Accompant Unit / Water Name / Location F	Cause		Cycle First Listed	TMDL Dev. Priority	Water Size
Assessment Unit / Water Name / Location D	•	ry Cause Name		•	
VAT-F27E_CDB01A00 / Cedarbush Creek - Uppe North shore York River, NW of Catlett Islands. From waters downstream to the end of TMDL (07) covera CBP segment YRKPH. DSS shellfish direct harvest # 047-078 C (effective 20180815).	the end of tidal ge. Portion of	Aquatic Plants (Macrophytes)	2006	L	0.078
VAT-F27E_CDB02A00 / Cedarbush Creek - Mouth York River, NW of Catlett Islands. CBP segment YFDSS shellfish condemnation # 047-078 C (2018080 TMDL.	RKPH. Portion of	Aquatic Plants (Macrophytes)	2006	L	0.015
VAT-F27E_CDB03A16 / Cedarbush Creek (Mouth Cedarbush Creek. CBP segment YRKPH. No DSS condemnation # 047-078 (effective 20180815).		Aquatic Plants (Macrophytes)	2006	L	0.090
VAT-F27E_CDB04A18 / UT to Cedarbush Creek Cedarbush Creek. CBP segment YRKPH. RESTRIC condemnation # 047-078 (effective 20180804).		Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F27E_CRT01A00 / Carter Cr. (Gloucester Co [TMDL-bact] / North shore York River, north of Cat the end of tidal waters downstream to the end of DS 047-078B, 20180815 . Portion of CBP segment YRI	lett Islands. From SS condemnation	Aquatic Plants (Macrophytes)	2006	L	0.180
Split in 2012 cycle					
VAT-F27E_CRT02A00 / Carter Cr. (Gloucester Cc / North shore York River, north of Catlett Islands. C YRKPH. DSS OPEN shellfish direct harvesting 047 date 20150804).	BP segment	Aquatic Plants (Macrophytes)	2006	L	0.177
VAT-F27E_FEL01A00 / Felgates Creek / South of within Naval Weapons Station. Segment extends from downstream to mouth. CBP segment YRKPH. DSS condemnation # 051-035 D (effective 8/14/2018)	om headwaters	Aquatic Plants (Macrophytes)	2006	L	0.236
VAT-F27E_IFC01A00 / Indian Field Creek / Sout Pennimon Spit, within Naval Weapons Station. CBF YRKPH. DSS condemnation (ADMINISTRATIVE) # (effective 2018-8-14).	segment	Aquatic Plants (Macrophytes)	2006	L	0.108
VAT-F27E_KNG01A02 / King Creek - Upper / So River. East of Pennimon Spit, within Naval Weapon From end of tidal waters downstream to end of DSS 051-035C, 8/14/2018. CBP segment YRKPH.	s Station facility.	Aquatic Plants (Macrophytes)	2006	L	0.128

York River Basin					
Shortened in 2012 cycle.					
VAT-F27E_KNG02A02 / King Creek - Mouth / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From boundary of (OPEN) condemnation # 051-035 (8/14/2018) to mouth. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.220
VAT-F27E_KNG03A20 / King Creek - Upper / South shore of York River. East of Pennimon Spit, within Naval Weapons Station facility. From end of tidal waters downstream to halfway through DSS Open condemnation-type # 051-035, 8/14/2018. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.072
Shortened in 2012 cycle.					
VAT-F27E_POP01A16 / Poplar Creek / Entirety of Poplar Creek. CBP segment YRKPH. No DSS condemnations.	4A	Aquatic Plants (Macrophytes)	2006	L	0.146
VAT-F27E_PRN01A00 / Perrin River - Upper / North shore York River near Cuba Island. Described in DSS Restricted condemnation # 046-081A (effective 20180906). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.052
VAT-F27E_PRN01C12 / Perrin River - Upper Middle / North shore York River near Cuba Island. Portion of DSS Restricted-Condemnation 046-081, 20180906. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.030
VAT-F27E_PRN02A00 / Perrin River - Lower / North shore York River near Cuba Island. CBP segment YRKPH. Portion of DSS seasonal condemnation # 046-081 M1 (effective 20180906) addressed in the TMDL.	4A	Aquatic Plants (Macrophytes)	2006	L	0.057
VAT-F27E_PRN02B12 / Perrin River - Lower Mouth / North shore York River near Cuba Island. CBP segment YRKPH. From boundary of DSS condemnation 81, 7/21/1996 to end of seasonal condemnation # 046-081 M1 (effective 20180906).	4A	Aquatic Plants (Macrophytes)	2006	L	0.048
VAT-F27E_SRH01A00 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northeast branch of Sarah Creek near Guinea Neck. DSS OPEN #046-052 B (20180906). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.110
VAT-F27E_SRH01B10 / Sarah Creek - Northeast Branch, Upper / North shore trib to York River near Gloucester Point. Segment includes north branch off of the northeast branch of Sarah Creek. CBP segment YRKPH. Part of DSS condemnation # 046-052 B, 20180906.	4A	Aquatic Plants (Macrophytes)	2006	L	0.029
VAT-F27E_SRH01D14 / Sarah Creek / North shore trib of York River near Gloucester Point. Segment extends from end of OPEN SF Cond 046-052 to end of TMDL area near Rt 642. CBP segment YRKPH. DSS condemnation # 046-052 M1 (effective 20180906).	4A	Aquatic Plants (Macrophytes)	2006	L	0.062
VAT-F27E_SRH02A08 / Sarah Creek - Lower / North shore trib to York River near Gloucester Point. End of TMDL study area to mouth. CBP segment YRKPH. DSS seasonal condemnation # 046-052 M1 (effective 20180906).	4A	Aquatic Plants (Macrophytes)	2006	L	0.026
VAT-F27E_SRH02B16 / Sarah Creek - Northeast Branch, Middle / North shore York River near Gloucester Point. Mainstem and tribs to the Northeast Branch. CBP segment YRKPH. DSS Restricted condemnation # 046-052 D (effective 09/06/2018).	4A	Aquatic Plants (Macrophytes)	2006	L	0.021
VAT-F27E_SRH03A20 / Sarah Creek - Northeast Branch / Sarah Creek is a North shore trib to York River near Gloucester Point. Northern branch of Sarah Creek near Guinea Neck. DSS Restricted-Condemnation #046-052 B (20180906). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.003

York River Basin					
VAT-F27E_SRW01A14 / Northwest Branch Sarah Creek / North shore York River near Gloucester Point. Segment extends from headwaters north of Rt 641 downstream to mouth of Northwest Br. DSS condemnation # 046-052 M1, A, C and E (effective 20180906). CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.193
VAT-F27E_TMB01A00 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of tidal waters downstream to the end of DSS shellfish direct harvesting condemnation # 047-003 A (effective 20170725). Portion of CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.139
VAT-F27E_TMB01B12 / Timberneck Creek - Upper [TMDL-bact] / North shore York River, NE of Catlett Islands. From the end of DSS shellfish Conditional Approval condemnation # 047-003 (effective 20170725). downstream to the end of TMDL (07) coverage. Portion of CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.077
VAT-F27E_TMB02A08 / Timberneck Creek - Middle / North shore York River, north of Catlett Islands. CBP segment YRKPH. DSS (OPEN) shellfish direct harvesting condemnation # 047-003 (effective 7/25/2017).	4A	Aquatic Plants (Macrophytes)	2006	L	0.034
VAT-F27E_TMB03A08 / Timberneck Creek - Mouth / North shore York River, north of Catlett Islands. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation present 20170725.	4A	Aquatic Plants (Macrophytes)	2006	L	0.188
VAT-F27E_WOR01A08 / Wormley Creek / South shore York River near Amoco facility southeast of Gloucester Point. CBP segment YRKPH. Upstream portion of DSS (ADMINISTRATIVE) condemnation # 052-006 A (effective 2018-05-03).	4A	Aquatic Plants (Macrophytes)	2006	L	0.283
VAT-F27E_YRK01A00 / York River - Lower Middle / The polyhaline boundary downstream to line from Roosevelt Pond N to Mumfort Islands at RM 7.49, excluding otherwise segmented DSS shellfish condemnation areas. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	10.393
YRKPH					
VAT-F27E_YRK01B00 / York R - DSS AdminCond @ Cheatham Annex/Camp Peary / Segment adjacent to Cheatham Annex, VDH-DSS condemnation 051-035 B (effective 8/14/2018) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.260
VAT-F27E_YRK01C00 / York R - DSS AdminCond @ Naval Weapons Station / Segment adjacent to Yorktown Naval Weapons Sta., VDH-DSS condemnation 051-040 B (effective 20180814) ADMINISTRATIVE condemnation due to National Security. CBP segment YRKPH.	4A	Aquatic Plants (Macrophytes)	2006	L	0.236
VAT-F27E_YRK01D06 / York River - Yorktown Beach / Yorktown Beach VDH bathing area. CBP segment YRKPH. No DSS shellfish direct harvesting condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	0.024
VAT-F27E_YRK01E06 / York River - Gloucester Point Beach / Gloucester Point Beach VDH bathing area. CBP segment YRKPH. Portion of DSS (OPEN) shellfish direct harvesting condemnation # 046-027 (effective 20120808).	4A	Aquatic Plants (Macrophytes)	2006	L	0.018
VAT-F27E_YRK02A00 / York River - Lower / Segment starts at line across river from Roosevelt Pond to Mumfort Islands (RM 7.49), downstream to mouth (RM 0.0) near Thoroughfare Creek. CBP segment YRKPH. No DSS shellfish condemnation.	4A	Aquatic Plants (Macrophytes)	2006	L	11.657

		Aquatic Plants (Macropi	nytes)	2006	L	0.508
side (south shore) of river. DSS demnation # 052-006 A (effective		Aquatic Plants (Macropi	nytes)	2006	L	2.698
ver - Lower / Portion of York River nnation 046-052M1, 20180906.	r 4A	Aquatic Plants (Macropi	nytes)	2006	L	0.139
ented estuaries in F27E / Non- ZE - Lower York River. Primarily ush and Timberneck Creeks. CBP nnations.	4A	Aquatic Plants (Macropi	nytes)	2006	L	0.112
Chesapeake Bay segment YRKPH				Reservoir		River
c Vegetation			` ' '	•	es)	(Miles)
atic Plants (Macrophytes) - Total In	npaire	d Size by Water Type:	28.874			
Atmospheric Deposition - Nitrogen	Clean Sediments Industrial Point S Discharge		Source			
	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley is refinery. CBP segment YRKPH. Ver - DSS AdminCond @ Wormley is side (south shore) of river. DSS demnation # 052-006 A (effective om Wormley Cr. to USCG Station, ment YRKPH. Ver - Lower / Portion of York River innation 046-052M1, 20180906. Ver - Lower York River. Primarily ush and Timberneck Creeks. CBP innations. PH c Vegetation atic Plants (Macrophytes) - Total Information Deposition - Nitrogen Loss of Riparian Habitat	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley it refinery. CBP segment YRKPH. Ver - DSS AdminCond @ Wormley as ide (south shore) of river. DSS demnation # 052-006 A (effective om Wormley Cr. to USCG Station, ment YRKPH. Ver - Lower / Portion of York River Annation 046-052M1, 20180906. Ver - Lower York River. Primarily ush and Timberneck Creeks. CBP mnations. PH C Vegetation attic Plants (Macrophytes) - Total Impaired Nitrogen Loss of Riparian Habitat Munici	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley direfinery. CBP segment YRKPH. Ver - DSS AdminCond @ Wormley aside (south shore) of river. DSS demnation # 052-006 A (effective om Wormley Cr. to USCG Station, ment YRKPH. Ver - Lower / Portion of York River 4A Aquatic Plants (Macrople on Macrople on M	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley differency. CBP segment YRKPH. Aver - DSS AdminCond @ Wormley and Side (south shore) of river. DSS demnation # 052-006 A (effective form Wormley Cr. to USCG Station, ment YRKPH. Aver - Lower / Portion of York River and Analysis (Macrophytes) Annation 046-052M1, 20180906. Advantic Plants (Macrophytes) 4A Aquatic Plants (Macrophytes) 4B Aquatic Plants (Macrophytes) 4A Aquatic Plants (Macrophytes) 4B Aquatic Plants (Macrop	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley direfinery. CBP segment YRKPH. Aver - DSS AdminCond @ Wormley discide (south shore) of river. DSS demnation # 052-006 A (effective om Wormley Cr. to USCG Station, ment YRKPH. Aver - Lower / Portion of York River demnation 046-052M1, 20180906. Advantic Plants (Macrophytes) 2006 demnation 046-052M1, 20180906. Advantic Plants (Macrophytes) 2006 demnation 046-052M1, 20180906. Advantic Plants (Macrophytes) 2006 demnations. Bettuary (Sq. Miles) 2006 demnations. Cover demnations (Macrophytes) - Total Impaired Size by Water Type: 28.874 demnations 28.874 demnations 28.874 demnations 29.8874 demnations 29.8874 demnations 2006 demnations 29.8874 demnations 2006 dem	DSS (ADMINISTRATIVE) shellfish ctive 20180503) adjacent Wormley differency. CBP segment YRKPH. Aver - DSS AdminCond @ Wormley and iside (south shore) of river. DSS demnation # 052-006 A (effective orm Wormley Cr. to USCG Station, ment YRKPH. Aver - Lower / Portion of York River Ad Aquatic Plants (Macrophytes) 2006 L contains in F27E / Non-47E - Lower York River. Primarily ush and Timberneck Creeks. CBP covery and timberneck Creeks. CBP covery Capital in the process of Riparian Habitat Municipal Point Source Sediment Resuspension.

Wet Weather Discharges

Combination of Stormwater,

(Point Source and

SSO or CSO)

Appendix 5 - 3375

Wet Weather Discharges

(Non-Point Source)

Draft 2020

Sources Outside State

Jurisdiction or Borders